An independent publication for **Users of HP Palmtop Computers**

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THE HP Palmtop Paper

Breakthrough Products for Palmtop Travellers...

Two New Fax/Modem / Flash Memory Cards and Two New Lightweight Serial Printers Reviewed

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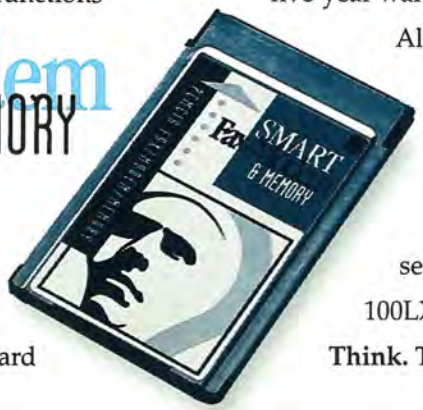
Fax/Modem & MEMORY



All told, the Fax Modem & Memory Card from SMART is a Calaveras County-like leap forward for palmtop computing and serious Hewlett-Packard 100LX and 200LX users like you.

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Publisher's Message

Top: Hal Goldstein
Bottom: Robert Roney and Rich Hall

It's hard to believe but this issue begins our fourth year publishing *The HP Palmtop Paper*. Almost four years ago HP introduced its "computer in your pocket," the 512K HP 95LX, as a Lotus 1-2-3 machine with some DOS compatibility and a useful suite of built-in applications. At the time, for an additional $400 you could buy a 512K memory card to store more data. Throughout the months and years the HP Palmtop and accessories evolved. Today for about the same total purchase price you can buy a true DOS compatible 2 Megabyte 200LX with a richer suite of applications and a 10 Megabyte card (20 compressed) for extra storage space.

The cover story unveils more of how the usefulness of the HP Palmtop has evolved. First of all, both Smart Modular Technologies and EXP Computer have introduced fax/modem & Flash memory storage cards. This means you can use your Palmtop and the card as a communicator without external accessories. The storage space on the card means there is room both for fax and modem software and for the data you want to send and receive across phone lines without having to borrow space from the built-in Palmtop C drive.

Secondly, Citizen and Pentax have introduced the first portable printers well-suited for the HP Palmtops. (When I show off my Palmtop, the most common question I hear is, "Can you print from it?"). Because of size, easy cable connection, and capabilities, these are the first printers I would take in my travels as an HP Palmtop companion.

But what about fun when you are on the move, you may ask. Turns out that there are lots of game possibilities for the HP Palmtop as you will read in Capers Jones' article. One game that didn't get mentioned is the ancient Chinese/Japanese game of Go. This is an elegant game, with simple rules, where two players take turns placing stones on a 19 x 19 board. The object is to surround the other without getting surrounded yourself. Philosophies of life and even popular novels have been written about this game of complexities and intricacies greater than chess. I recently discovered a version that works quite nicely on the HP Palmtop, "Many Faces of Go" by Ishi Press (see Product Index, page 55). The program lets you play on different sized boards and has tutorials and commented games for both beginners and experienced players. I have spent hours in airports locked in battle with the computer totally absorbed.

I'll let you page through this issue to discover the rest of the goodies. (Hint: 200LX users check out Ed Keefe's Looking Glass column where a useful undocumented HP 200LX feature is revealed and extended.)

After supporting the HP Palmtop these past three and a half years, people ask us, "Don't you run out of material," and "Don't you get tired of writing about the HP Palmtop?". Frankly. I am more excited and impressed today about the HP Palmtop and what it can do for me than I was when we began this publication. The possibilities of a DOS computer in my pocket seem endless. As we (HP Palmtop users) continue to discover and invent more uses for our pocket computer, we will continue to report the findings in these pages.

Hal Goldstein

The HP Palmtop Paper

INCREASING YOUR PERSONAL POWER BY EXPANDING YOUR PALMTOP'S POTENTIAL

Volume four / Number one

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Palmtop Wisdom

Personal Effectiveness Using The HP Palmtop

The editors of ***The HP Palmtop Paper*** *welcome you to* ***Palmtop Wisdom****. Palmtop Wisdom takes the latest thinking about* ***leadership, human relations, time management, finance, self-development, travel,*** *and* ***entertainment*** *and shows the concrete application of these concepts using HP's 100/200LX Palmtop PCs.*

We welcome your feedback, ideas, and contributions.

By Hal Goldstein

PERSONAL LEADERSHIP

What to do with new ideas

Most of us get useful ideas during the day that have nothing to do with what we are working on. Many of these ideas can be very useful, but tend to get lost without an organized way to collect them. The built-in NoteTaker application is perfect to track these ideas for later review.

The category field is what gives this application the most power. As you start entering ideas, you will notice that the ideas fall into categories. Examples of how to classify your ideas might include books to read, things to do with your son, a marketing idea, some suggestions for your boss. Some of your ideas, such as a book for your son, might have two categories.

ON THE PALMTOP: To start NoteTaker just press [&...] (More) [N], or press [CTRL]-[MEMO].

Press [F2] to enter an idea. If the idea can be expressed in a few words just use the Title field. Other times you will want to elaborate in the Note field.

When it is time to type in the category, keep its name short. You are only allowed 256 total characters when you combine all the names of your categories. So you might name your categories, **Books**, **Son**, **Mkt**, **Boss**. The first time you use a category, simply type in the category name. Subsequently, from the Category field, press [<DownArrow>] and then type the name of the category until the cursor falls on it. Press [ENTER] or if you want to assign more than one category press [<Spacebar>] on each category, press [ENTER] when you're done. Finally press [F10] to save the note.

Categories in NoteTaker

You can view ideas according to categories. For example, let's view those notes related to Son. To create a Subset for Son from the All Notes view, press [F6] Subset, [F2] Define. [<Tab>] [<Tab>] to Category, press [<DownArrow>] and type **s** to put the cursor on **Son**. Press [ENTER] and then [F10], OK. Give a name to the subset, say "Ideas for Solomon" and then press [F10], OK. Now to view all ideas concerning your son press [F6], Subset, and select "Ideas for Solomon". Press [ENTER] and you can examine your thoughts about Solomon. To look at all notes again press [F6] Subset and put the cursor at the top on "All Notes" and press [ENTER].

HUMAN RELATIONS

Finding phone numbers when you need them

There is a simple practice that I guarantee will pay off handsomely. Whenever you make a new contact, find yourself calling a new number or writing a new address, *ALWAYS* enter that information into HP Palmtop PHONE book!

If you think you may forget who that contact is, be sure to type in key words in the Note field. Use any identifying characteristics: tall, mustache, met in New York, publisher's conference. Take the minute or two required to enter the name, address, phone number, and key words.

This method of always entering contact information, has saved me incredible time, hassle, and embarrassment in the years that I have used the Palmtop. Sometimes it has been over two years since I needed that contact information - sometimes just a person's name. Without the Palmtop that information would have been almost impossible to find.

ON THE PALMTOP: It's only two keystrokes, [PHONE] and [F2] to add a contact. So always enter phone information into PHONE book.

[ALT]-[N] takes you directly to the Note field. Put anything here that will help you remember, tall, thin, Sam's uncle, New York, etc.. The next time you need to call and can't remember the name, do an [F4] Find on "Sam's uncle" or "New York".

TIME

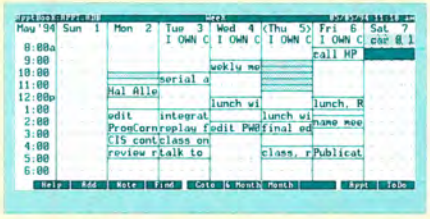
Plan for the week first, then for the day

There are many in the time management field who suggest, plan for the week, then review tasks at the beginning of the day as opposed to just creating daily to-dos. The advantage

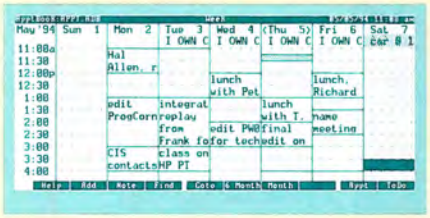
of the weekly view is you have more perspective. You can schedule personal as well as business priorities at a time when you are not in "the heat of battle". If you only schedule a day at a time, you are likely to be driven only by what is urgent rather than what is important. If you make time for non-urgent yet important items, in the long run you will have less fires to put out.

The advantage of this approach is that you can allocate chunks of time at the beginning of the week to "work on the business," not in it. If an emergency comes up, you should immediately reschedule these important "appointments" with yourself.

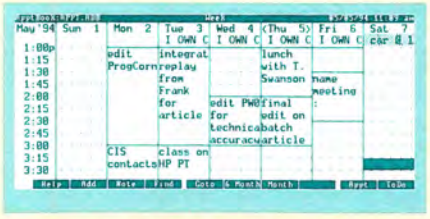
ON THE PALMTOP: Fortunately, week-at-a-time planning is easy with the HP Palmtop. One approach is to enter the week-at-glance view by pressing [F8] from APPT.



APPT list, hourly appointments



APPT list, every half hour



APPT list, every 15 minutes

Pressing [Fn]-[<Spacebar>], ZOOM, changes the hourly listings from every 15 minutes to every 30 minutes to every 60 minutes. This gives you different perspectives on the week. In the hourly view you can see what time slots are full for the whole week from 8:00 AM to 6:00 PM. On the 15 minute view you see less of the day, but can read more of the specifics of the appointment. When you are planning for the week, on the Week screen move your cursor to the day and a nearby time slot (for what you want to schedule). Press [ENTER] and type in the activity or appointment, adjusting the time if necessary.

You can also use the ToDo function of APPT in a similar manner during your weekly planning session. We'll discuss some more ideas about weekly planning in another article.

FINANCE

Building wealth: Pay yourself, not the bank

In general, there are three things you can do with money. First you can buy things (consumer goods, car, home). With the possible exception of property, most anything you buy quickly depreciates in value. Secondly, you can earn interest by loaning your money to the bank (bank account) or to a corporation (bonds). Finally, you can own equity in companies (your own company or stock). Over the long haul, one becomes financially self-sufficient by owning equity or investing in assets that appreciate.

The antithesis of wealth producing activity is consumer debt. When you borrow money to buy consumables, you are not building wealth. In fact you are going in the opposite direction. You receive no value for your monthly credit card interest or car payment. You are just helping those that loan money and own loan institutions to become wealthy. Some self-discipline will pay off in the long run.

The HP Palmtop, HP Calc and Lotus 1-2-3 programs can play a significant role in strengthening your personal financial position. Use them to help you eliminate your consumer debt and start accumulating equity.

ON THE PALMTOP: You probably have a rough idea when you want to buy your next car and what you can afford a month. Suppose you can afford $500 a month and you would be willing to wait for 3 years. Suppose further you place that $500 a month in some conservative investment that earns 4% per year.

Go to HP Calc, press [CTRL]-[t] or [MENU] **A**pplications **T**VM. Move the cursor up to number of periods. Enter **36** (months). Move the cursor down one and enter **4** (for 4%). Make sure Present Value is 0, and type in **500** for Payment. Press [F10], FV (or move the cursor down to Future Value and press [<Spacebar>]). You'll see that at the end of 3 years, you will be able to purchase a car for $19,090.78.

Calculator
Time Value of Money - case 2
Number of periods..... N = 36.00
Annual interest..... I%YR = 4.00
Present value..... PV = 0.00
Payment..... PMT = 500.00
Future value..... FV = -19,090.78
Payments per year..... P/YR = 12
Begin/End mode..... B/E = END
FV = -19,090.78

Using TVM to determine how much you can save for a car over three years

Now suppose in three years you hadn't been saving. Let's see what the monthly payments would be, if you were to purchase that $19,090.78 car. Assuming $19,090.78 is still on the calc line in the lower right, move the cursor to PV and press [ENTER]. (Otherwise just reenter the number at PV). Type **0** followed by [F10], FV. For this example, let's assume your loan will cost you 10%, so type **10** and press [F7], I%YR. Now press [F9], PMT and your monthly payment becomes $616.01.

But suppose at car purchase time, you can still afford only $500 a month over a 3 year period. Type **500** [F9], PMT, [F8], PV. You will be able to purchase a $15,495.62 car not a $19,090.78 car.

Dictionary and Thesaurus on the HP Palmtop

I got the *Webster's Random House Electronic Dictionary and Thesaurus – College Edition* running on my HP 100/200LX. It occupies 10MB (uncompressed) on my flash card and it is faster and more comprehensive than the American Heritage Dictionary (see article, Vol.3, No.4, Pg.24). Having Webster's in my pocket is incredibly useful.

Edward A. Cane
CompuServe ID: [73051, 3722]

[Webster's is published by WordPerfect Corporation and retails for $69. The slimmed-down School and Office version retails for $29. For further information, contact WordPerfect Corporation at 800-321-4566, or contact a software retailer in your area – Rich.]

How to use "Successful Habits" database

I downloaded the "Habits of Highly Successful People" database file mentioned on page 41 of the May/Jun 94 issue (1STTHING.ZIP). I have loaded it, but cannot save changes

CompuServe ID: [73477,1305]

[With the above mentioned Database loaded, look at list screen. Does "This Week" appear in in the center of the top line? If so, you have a subset selected. Your entries have been saved, you just can't see them because the subset only displays Items due this week. To correct, press [F6] (Subset) and select All Items – Robert Roney.]

Loved Palmtop Wisdom

I loved the Nov/Dec 94 issue, especially the new Palmtop Wisdom section. I immediately implemented the Leadership suggestion in the APPT application (page 3). However, the way I read it and implemented it, the message is an event. In the APPT application, this places the event above all the daily appointments and I can't get to it. Having the message "Press F3" seems ludicrous. It results in a warning beep.

Any suggestions? Is there something I am missing?

E. Gordy
INTERNET ID: egordy@heartland.bradley.edu

[There is something missing. If you press [<Tab>], the cursor will move up to the event. Then pressing [F3] will display the mission statement that was put in the note field. Press [ESC] or [F10] to leave the note field. Pressing [<Tab>] again will move the cursor to the first appointment of the day – Robert Roney.]

Cold, Dark, and the HP Palmtop

It was a long, sub-zero, winter's night many miles above the arctic circle. A group of five people, bundled in cold-weather gear, jogged into sight, brave participants in the 14th Annual Prudhoe Bay, Alaska, Five-Mile Fun Run.

Joining in on the run (more accurately a fast walk), I pulled out my HP 95LX, opened Memo and attempted to capture the descriptive flow of the run, the people, their feelings and comments, and our extreme surroundings.

Every year we do something a little different in the run. This year the difference was the HP Palmtop. We were using the HP 95LX and 95Buddy to time runners and make notes. In weather this cold the display turns blank almost immediately, but that doesn't affect the other functions – we can still work the stopwatch and take notes in Memo. To give myself a little edge, I used a hand warmer to keep my fingers and the Palmtop from completely freezing.

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We trudged forward in a pack to complete the run, watching arctic foxes in their white winter coats making tracks in the snow and hoping we didn't run into their big white brothers, the polar bears. We all made it back to the warm base operations center and thawed out, satisfied that we'd completed the run in -14° F temperatures with the southwest wind at 8 knots (with a wind chill factor of -32°). This was relatively mild compared with some years. The Palmtop's screen thawed out also, displaying characters as clearly as ever.

Kip Absher
BP Exploration
North Slope, Alaska

Flight simulators and other software

Below are comments on some games, utilities and other files I've found for the HP 100LX. First the games.

I would say that JetFighter II by Velocity is the best of the newer flight simulators that runs on CGA, hence the HP 100/200LX. (See Product Index, page 55.) Load it and press ON-+ or ON-- to invert the screen and adjust contrast as needed. The first release copies have a couple bugs worth noting... falling through the carrier on takeoff/landings occasionally. And it slows the clock down after extensive play. A free update is available to correct these problems. It needs about 1.1MB on a PCMCIA card. JetFighter II lets you chase MIGs and CRUISE missiles; then shoot back!! You get 5 different jets to choose from and a good story line. Well worth the $25 I paid. And since it comes with CGA, EGA, & VGA drivers you can also play it on your desktop PC computer.

Mallard's Flight Planner (ver 91.1230) is the only other one I know that is still carried in some stores. *[Flight Planner may still be available in some stores, but Mallard Software's phone is disconnected and we cannot find a new number – Rich.]*

Falcon XT (or 1.0; not to be confused with Falcon AT) is no longer available through Spectrum Holobyte, its developer. However, I recently found it for $9 at a Best Buy Superstore, so there are still some copies out there. Although Jetfighter II is far better, Falcon XT occupies less than 500K and may be more suitable for those with limited disk space.

POPGAMES is a pop-up TSR program of four games: *Tetris, Numbers, Lightcycles*, and *Breakout*. **Pop** loads the program, **pop stop** removes it. If you load it while shelled to DOS it will be removed when you quit the System Manager. If you hit ESC while playing one of the games, POPGAMES keeps your place in the game until you come back or quit entirely. You can keep it loaded and pop it up between other work. POPGAMES occupies only 30K and can stay on the RAM disk. Best of all, POPGAMES is FREEWARE and for a modest fee you can get more games. It's the first good game I've found for those without PCMCIA storage.

I've discovered some additional useful utilites and 100/200LX-related files that make life easier on the HP Palmtop.

STRIPCR.COM strips a file of all carriage returns (type **stripcr <filename> newfilename**).

CASE.COM converts a file to all capital letters (type **case <filename> newfilename**). CASE can really improve the readability in batch files.

FIDROOF.SND is a custom alarm for the 100/200LX Appointment Book. Remember the movie *Fiddler on the Roof*?

VERSES.GBD is a database I created to keep favorite scriptures. By placing a subject label with each verse, you can create subsets on faith, law or whatever topic you choose. Keep verses with numbers less than 10 ordered properly in the database lis by preceding they with a 0 (i.e., 01,02,03, etc.). Very little modification could adapt this database for any denomination or religion.

Thank you for the great tips in past issues. Many should have been in the owners manual. Especially the screen inverter and contrast controls. These are a must for CGA games.

Phillip Nichols
Internet ID:
pnichols@bbs.gatecom.com
Trenton MI, USA

[See games article, page 20 this issue, for more fun.]

Get R.E.S.P.E.C.T. with the HP Palmtop

In college I used to fix my own Volkswagen Bug. I knew the engine backwards and forwards. The guys in various auto parts shops got used to seeing me in my greasy work cloths and talking shop with me.

Times change. I have my master's degree in education and still occasionally substitute teach when my duties as a full-time mom permit.

Recently I walked into the local lumber yard, kids in tow, looking for some drywall joint compound (a.k.a. "mud"). Standard drywall joint compound comes in premixed buckets and powdered form that you mix. We use it a lot in remodeling for sealing seams and texturizing walls. The premix mud smells like it may have some chemical preservatives added to prevent spoiling. (The odor of drying mud fills the house for a couple of days after its use.) I tend to be conservative when it comes to the health of my family, and prefer the powdered, "non-toxic" variety.

There I was in the only lumber yard in a small midwestern town of about 10,000. I'm not sure whether it was the fact that I was a woman with two kids in tow, or the use of the word "non-toxic," when requesting joint compound, but the clerk looked bewildered and the guy in line behind me snickered.

The conversation went something like this:

Clerk: "You mean mud?"

Me: "Yes."

Clerk: "But mud's non-toxic. It's got to be; it's just plaster; I've used it all my life."

Me: "Don't you notice the smell? It lasts for days afterwards."

Clerk: "It's dry in a day, then I don't smell anything."

Me: "My husband can't smell anything either."

I took out my Palmtop because I had a note on it about the powdered drywall compound. I have a MEMO file on my HP 95LX that I use for notes. I keep it loaded all the time so that when I turn my Palmtop on, the information I need is there. I jot down quick notes and tentative appointments that I either save in that file, or transfer to my home calendar later on.

The clerk and the guy in line behind me immediately became attentive. Right below the notation about buying a jump rope for the Sunday School was the following note:

```
Jerry Roper (his phone number). Call about non-
toxic drywall joint com-
pound and paint. Tell him
I talked to Bruce.
```

I showed the note to the guys. The guy behind me was impressed and said, "I think I've heard of that stuff."

The clerk said, "I'll see if I can get it in."

[Letters continued page 48.]

NEWS

Palmtop News

New, full-featured, fast, color HP OmniBooks; Revised PC Card standard

By Palmtop Paper staff

Pocket Quicken Synchronize/Merge option update

A problem has been discovered with the Pocket Quicken Synchronize/Merge option available with the HP 200LX Connectivity Pack that may result in incorrect data in Quicken data files. The problem is isolated to the Connectivity Pack's Synchronize/Merge function for Pocket Quicken. The Synchronize/Merge for other applications is not affected.

Users should not perform the Synchronize/merge function for Pocket Quicken until the updated code is available (anticipated for February, 1995). However, you may continue to use Pocket Quicken and Quicken as usual. Making a backup copy of all important files, including Pocket Quicken and desktop Quicken data files, is always prudent.

The corrected code can be received free of charge by any one of the following methods:

- Call 800-443-1254. Follow the prompts through the Palmtop selection and leave your name and address.
- The updated software will also be posted on CompuServe in the HP Hand forum.

Every effort is being made by Hewlett-Packard Company to remedy this situation as soon as possible. HP expressed thanks for customer patience on this.

[The HP Palmtop Paper will try to get permission to put the update on an upcoming issue of The HP Palmtop Paper ON DISK. When the Jan/Feb 95 issue went to press, the software update was still being tested by HP — Rich.]

HP Palmtop/OmniBook repair and exchange in Canada

HP Palmtop and OmniBook users in Canada can arrange for repairs of their units by calling **800-268-1221** (Canada only). HP 95LX users will have to send their units in to be serviced. HP 100/200LX and OmniBook users can request a unit exchange (i.e., having a refurbished unit sent to them to replace their faulty unit) or send their units in for service. Unlike U.S. Express Exchange, there is a fee associated with the unit exchange service. For more information contact the toll free number above, or write: *HP Canada Service Centre, 5101 Orbitor Drive, Unit 1, Mississauga, ON L4W 4V1, CANADA.*

New, full-featured HP OmniBooks with color display

Hewlett-Packard Company recently unveiled two new OmniBook PC computers. The HP OmniBook 600 is a lightweight, full-performance color notebook computer. The HP OmniBook 4000 combines fast performance and a large, brilliant color display.

The HP OmniBook 600 PC: Lightweight color notebook

At 3.8 pounds, the HP OmniBook 600 is larger than previous OmniBooks. But it is also packed with features, including a back-lit, 8.5-inch color display, a nickel metal hydride battery providing up to four hours of battery life, and Instant-On, which allows the user to return immediately to where they were when they turned the machine off. The 600 PC system also includes an HP Palmtop-compatible Personal Information Manager, financial calculator, and comes with a full-size keyboard, pop-up mouse and an optional recharger that allows customers to recharge multiple batteries.

The 600PC features two free Type II PCMCIA slots (useable as one Type III slot), an infrared port as well as serial, parallel, floppy drive, and SVGA display ports. An optional enhanced port replicator is available with SCSI-2, PS/2 mouse and keyboard ports, in addition to a LAN-card expansion slot.

The new HP OmniBook 600 PCs are equipped with Intel 486DX2/50 or 486DX4/75 processors, 4 or 8MB of RAM expandable to 12 or 16MB, and a 170MB or 260MB hard drive (1.8-inch PCMCIA Type II). The HP OmniBook 600 PC series is expected to start at an estimated street price of $2,599 for a system equipped with the Intel DX2/50 processor, 170MB hard drive and 4MB of RAM. The 600 PC ships standard with an external floppy drive, serial cable, external AC adapter, power cord and rechargeable NiMH battery pack.

HP OmniBook 4000 PC: Fast portable with large, brilliant color display

The HP OmniBook 4000 series features a range of processors up to 100MHz DX4, with RAM expandability up to 32MB and hard drives up to 520MB. The 4000 provides enhanced presentation quality with built-in Sound Blaster Pro-compatible stereo sound and a brilliant 10.3-inch DSTN or 10.4-inch TFT color display.

For extended trips away from a power source, the HP OmniBook 4000 PC's battery life can be doubled by substituting an optional second battery for the floppy drive, resulting in a battery life of five to seven hours. The 4000 PC also comes with a wrist rest and centered trackball for additional comfort. It connects to the outside world via infrared port, serial, parallel, SVGA-out, and audio and keyboard/mouse ports. It has as an option the enhanced port replicator described in the OmniBook 600 description above.

Both HP notebook computers have user-upgradeable flash BIOS, allowing them to easily upgrade to Microsoft Windows 95 when it becomes available. They are preloaded with MS-DOS 6.2, Windows for Workgroups 3.11, LapLink Remote Access, and HP's Windows-based, HP Palmtop compatible PIM software. The HP OmniBook 4000 PCs are expected to start at an estimated street price of $3,299 for systems equipped with an Intel DX2/50 processor, 260MB hard drive, DSTN display and 4MB of RAM. The 4000 PC ships standard with a built-in floppy drive, rechargeable NiMH battery pack and an AC adapter with power cord.

HP reducing desktop and server prices

HP has recently announced price reductions of up to 26 percent on its Vectra desktop PC and up to 22 percent on its NetServer PC servers. The reductions are expected to make HP desktops and servers less expensive with comparable Compaq's, IBM's, and computers from other major manufacturers.

HP also announced an expansion of its distribution channel, to increase desktop/server sales through authorized value-added resellers in the United States.

We announced in the Nov/Dec 1994 issue the HP Palmtop's move to Singapore. Beginning November 1994, Singapore is responsible for HP Palmtop development, support, marketing and manufacturing.

PCMCIA, JEIDA unveil new, unified PC Card standard

The Personal Computer Memory Card International Association (PCMCIA) and its Japanese counterpart, the Japan Electronic Industry Development Association (JEIDA), have recently introduced a unified, worldwide *PC Card™ Standard*.

The new global standard includes a variety of technical enhancements and features designed to broaden the market for PC Card technology. The following enhancements are of particular interest to palmtop users:

1. PC Cards designed to the new standard will be able to offer users multiple functions on the same card. The old standard allowed for cards combining an I/O function and memory, like fax/modem plus flash memory cards. The new standard lets developers combine input/output functions on the same card, for example data/fax and LAN access capabilities.

2. The new 3.3 volt standard will allow developers to create memory and I/O cards that use less energy, lengthening the battery life of the device into which they are inserted.

3. The new standard also provides additional tools to improve compatibility, making it easier for software to identify, configure and use PC Cards. The standard includes a set of guidelines, making it easier for developers to achieve higher levels of compatibility with their products.

Backward compatibility has always been a priority with PCMCIA, and this new release continues that tradition. Existing PC Card products will work at least as well under this release of the standard as they did under previous release. For example, if a PC card works in a current device, it works in a comparable device created under the new standard.

However, not all products designed to take advantage of the new standard's features will be compatible in existing environments. For example, a PC Card designed to operate only in a 3.3 volt environment will not work in an existing 5 volt Palmtop or desktop PC. Fortunately, like existing cards, cards created under the new standard can be designed to work in both 3.3 and 5 volt environments.

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"Terrific..." – Mark Gitlitz

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"PC CARD REVIEW"*

A special report with all the information you need to make sense of the many types of PCMCIA cards becoming available:

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BACK ISSUES AVAILABLE

Third Party Products of Interest to HP Palmtop Users

This section lists products new since the last issue and includes hardware, software, books, videos, training, and services of interest to HP Palmtop users. The icons above the product name indicate which Palmtop the product is suitable for: 95LX *for the 95LX,* 100/200LX *for the 100/200LX (in some cases, the product may be suitable for the 100LX or 200LX, but not both). Prices listed are suggested retail.*

We invite vendors and subscribers to send us information about HP Palmtop-related products they discover. We rely on information we receive from the manufacturer and cannot test every piece of hardware or software. We welcome any user feedback on product suitability.

By Richard Hall

Hardware

Card Drives

95LX 100/200LX

AC Traveler

This portable AC power inverter turns your vehicle's cigarette lighter into an AC outlet that will power the HP Palmtop's and OmniBook's AC adapter. It can also be used to power TVs, VCRs, power tools, lights, and other household appliances. Low battery alarm and automatic shut-down protect your vehicle's battery.

Availability ..... Now
Pricing $89.95
CONTACT: *Major Electronix, 33900 Curtis Blvd., Unit 210, Eastlake, OH 44095; Phone: 800-966-2345 or 216-942-0054; Fax: 216-942-2102.*

Cables

95LX 100/200LX

PC CommLink RJ-11 cable interface

Compact fax/modem telephone cable interface. Internal RJ-11 cable extends from and retracts into a card the size of a PCMCIA Type III card.

Availability ..... Now, OEM Only
Pricing ..... Call
CONTACT: *Shape Technology, 2105 S. Bascom Avenue, Suite 336, Campbell, CA 95008, USA; Phone: 800-462-4165 or 408-369-8136; Fax: 408-369-8066.*

95LX 100/200LX

Printer Cables for Citizen and Pentax Portable Printers

Custom cables let you connect the Citizen PN60 and the Pentax PocketJet portable printers to the 100/200LX (see review, page 13).

Availability ..... Now
Pricing, PN60 cable $42
PocketJet cable $35
CONTACT: *Shier Systems & Software, 920 Hampshire Road, Suite A29, Westlake Village, CA, 91361, U.S.A.; Phone: 805-371-9391; Fax: 805-371-9454; CompuServe ID: [75030,3374].*

Fax/Modem Cards

200LX

Cardwell Fax/Modem 14.4-E

A 14400 bps fax/modem Type II card with Group 3 fax capabilities (also supports older class 1 & 2 fax machines). Extended AT Command Set provides compatibility with a wide range of PC-based communication applications.

Availability ..... Now
Medium ..... PCMCIA card
Pricing $189
CONTACT: *Cardwell International, 110 Blue Ravine Road, Suite 156, Folsom, CA 95630-4712, USA; Phone: 916-985-1880; Fax: 916-985-1899.*

HP Palmtop Users Groups

Those interested in participating in an HP Palmtop users group should contact the following individuals. Write us if you wish to be added as a contact for a users group in your area.

Cleveland, OH (USA) – 95LX/100/200LX users in the Cleveland area should contact: Craig de Fasselle, c/o MEM, Inc., 4702 East 355th St., Willoughby, OH 44094; Phone: 216-951-1333.

Boston, MA (USA) – 95LX/100/200LX users in the Boston area should contact: *Bryan Krauthamer, CompuServe ID: [70444,41].*

Detroit, MI (USA) – 95LX/100/200LX users in the Detroit area should contact: *Jeff Zorn, 29311 Ara-nel, Farmington Hills, MI 48334-2815; Phone: 313-489-1855 (EST) or Louis Peeples, St. Clair Shores MI 48080; Phone: 313-777-9390.*

GERMANY – HP Palmtop/Omnibook users in Germany should contact: *Eckart Prinz, Obere Mühlstr. 56a, 64291 Darmstadt, GERMANY; Phone/Fax: +49 6151 376065.*

GERMANY / LUXEMBOURG – Not an official user group but this individual is willing to help HP Palmtop users with questions or technical problems; contact: *Gilles Kohl, Hagsfelder Allee 16, D-76131 Karlsruhe, GERMANY; CompuServe ID: [100114,3146]; Internet ID: gilles@spam.fido.de; Phone: +49-721-69-36-55 (after 6 p.m. Central European time).*

HOLLAND/BELGIUM – HP 95LX/100/200LX users in the low countries should contact: *PROMPT HP-GC, Mister G. Dongs, Postbus 1081, 1500 AB Zaandam, HOLLAND; Phone: +31 75704205.*

Illinois (USA) – 95LX/100/200LX users in the Chicago area should contact: *Gordon Campbell, 29W051 Barnes Ave, West Chicago IL 60185; Phone 708-231-6796.*

INDONESIA – HP Handheld users (HP 75C, 110, 48, 12, 100/200LX) in Indonesia should contact *Dirk H. Eversbert, c/o P.T. Austindo Mitratama, Mr. Elman Sunarlio, Jl. Gunung Sahari 2/6E, Jakarta 10610, INDONESIA.*

Kansas (USA) – Contact: *Marietha Wilson, P.O. Box 1151, Manhattan, KS 66502-0012, USA; Phone: 913-532-9775.*

Los Angeles, CA (USA) – 95LX/100/200LX users in the LA area should contact: *Dave Shier at 805-371-9391; Fax: 805-371-9391; CIS: [75030,3374] for more information.*

New Jersey/New York (USA) – 95LX/100/200LX users in the New Jersey/New York area. Contact: *Stanley Dobrowski, 113 Carlton Avenue, East Rutherford, NJ, 07073-1038; CIS ID: [71031,2162]; Phone: 201-807-5857 (work).*

Oklahoma City, OK (USA) – 95/100/200LX users in the Oklahoma City area. Contact: *Richard B. Meek, 1804 Huntington, Oklahoma City, OK 73116, USA; Residential Phone: 405-842-1267.*

Richmond, VA (USA) – For 95LX/100/200LX users in the Central Virginia area. Contact: *John Haskell, 7102 Three Chopt Road, Richmond, VA 23226-3615. CIS ID: [70750,1243] or Phone: 804-288-6073 (work).*

San Diego, CA (USA) – For 100/200LX users in the San Diego area. Contact: *Mark Gitlitz, Internet: gitlitz@hdssd.hitachi.com; Work phone: 619-537-3000; Fax: 619-695-9501.*

San Francisco, CA (USA) – S.P.A.M (Society for Palmtop Advancement through Meetings). For HP Palmtop users in the Bay Area, Northern California. Contact: *Dennis Dodd, CompuServe ID: [73301,3214]; Phone: 415-592-3970.*

Seattle, WA (USA) – For HP Palmtop and Handheld users in the Puget Sound area. Contact: *Kent Peterson, 360 N.W. Dogwood, A-201, Issaquah, WA 98027. CIS ID: [72310,2174]; Internet: peterson@halcyon.com; Phone: 206-392-3123.*

SCANDINAVIA – For HP Palmtop users in the Scandinavian countries. Contact: *Martin Hagvall, Vaermegatan 9, 41832 Goeteborg, SWEDEN; Phone: +46-31-533300; Fax: +46-31-141410.*

SOUTH AFRICA – HP Palmtop/Omnibook users in South Africa should contact: *James Dean. CIS ID: [70714,613]; Internet address: james@charon.hipsys.co.za; Phone: (011) 806-1382 (O/H); Fax: (011) 806-1353.*

TURKEY – HP Palmtop users in Turkey should contact: *Ahmet G. Ozisik, Soyak Binasi, Buyukdere Cad. 38, Mecidiyekoy, Istanbul 80290, TURKEY; Phone: (212) 275 09 10 (ext. 309); Fax: (212) 211 57 61.*

UKRAINE – For HP Palmtop users in the Ukraine, Odessa, Kiev, Crimea regions. Contact: *Linetskyy V. Oleg, ПРЕДПРИЯТИЕ "ПРОГРЕСС", 1, Varvarovsky Spusk, Nikolaev, 327015, UKRAINE; Phone: (051) 36-73-51 36-73-13; Fax: (051) 24-41-25.*

100/200LX

EXP ThinFax Fax/Modem, Flash Memory Card

Designed for the HP 100/200LX, this PCMCIA combination card comes with fax/modem and Flash memory built into one card. The card also has System-Manager compliant MiniFax fax/modem software built in. The ThinFax card lets you transmit faxes and data at 14,400 bps.

The card comes with 2MB or 4MB of Flash memory on board, giving you file storage and fax/modem capability on one card. *(See review page 13.)*
[See advertising, inside back cover.]

Availability ..... Now
Medium ..... PCMCIA card
Runs under SysMgr ..... Yes
Pricing of ThinFax 1414LXM
w 2MB Flash $349
w 4MB Flash $399
no Flash $299
CONTACT: *EXP Computer, Inc., 12C Maunchly, Irvine, CA 92718, USA; Phone: 800-EXP-NYCA or 714-453-1020; Fax: 714-453-1319.*

Ethernet Cards

100/200LX

Silicom PCMCIA Ethernet SPE Card

This Ethernet adapter card ships with its own PCMCIA Support Driver software for the HP 100/200LX Palmtop PCs. Install the software on the Palmtop, slip the card in the Palmtop's PC Card slot and connect up to your Ethernet Local Area Network.

The card comes with ODI, NDIS, and Packet software drivers to support all major Network Operating Systems, including Netware, Novel DOS 7, Microsoft Networks, Banyan VINES, Artisoft LANtastic, TCP/IP, and others.

Availability ..... Now
Medium ..... PCMCIA card
Pricing of Ethernet adapters
10Base-T adapter $229
CONTACT: *Silicom Ltd. Connectivity Solutions, 15311 N.E. 90th St., Redmond, WA 98052, USA; Phone: 206-882-7995; Fax: 206-882-4775.*
Silicom Ltd., International Headquarters, 13 Hasadna St., P.O. Box 2448, Ra'anana 43100, ISRAEL; Phone: 972-9-916-953; Fax: 972-9-917-192.

100/200LX

Silicom PCMCIA EtherFlash Card

This Ethernet adapter card comes with 1MB or 2MB of Flash memory built in, and ships with its own PCMCIA Support Driver software for the HP 100/200LX Palmtop PCs. Install the software on the Palmtop, slip the card in the Palmtop's PC Card slot and connect up to your Ethernet LAN. Provides both LAN adapter and Flash memory in one card slot.

Availability ..... First quarter 95
Medium ..... PCMCIA card
Pricing
10Base-T with 1M Flash . $349
10Base-T with 2M Flash . $419
CONTACT: *Silicom Ltd. Connectivity Solutions, 15311 N.E. 90th St., Redmond, WA 98052, USA; Phone: 206-882-7995; Fax: 206-882-4775.*
Silicom Ltd., International Headquarters, 13 Hasadna St., P.O. Box 2448, Ra'anana 43100, ISRAEL; Phone: 972-9-916-953; Fax: 972-9-917-192.

Memory Cards

95LX 100/200LX

Cardwell Memory Cards

Cardwell's PCMCIA SRAM Cards use low power chips and include an internal auxiliary battery, ensuring data retention during main battery replacement.

Cardwell also has PCMCIA Flash Cards available for the HP 100/200LX.

Availability ..... Now
Medium ... PCMCIA Memory Cards
Pricing
1MB SRAM $169
2MB SRAM $289
1MB FLASH $129
2MB FLASH $179
4MB FLASH $249
CONTACT: *Cardwell International Corporation, 110 Blue Ravine Road, Suite 156, Folsom, CA 95630-4712, USA; Phone: 916-985-1880; Fax: 916-985-1899.*

95LX 100/200LX

Shape PCMCIA Protectors

These pocket-sized molded plastic cases provide protection for your PCMCIA cards.

The PC DuraStor is a molded clear plastic case to protect your card from dust and debris.

The PC CardStor is molded in high impact, unbreakable polypropylene to provide maximum durability and strength.

The PC Data Store is designed to meet or exceed industry drop test standards and has a floating internal tray for maximum shock absorption.

The PC FlexStor is a vinyl, pocket sized single storage case.

The PC MultiStore accommodates up to six Type I or II PCMCIA cards, or three Type III Cards, or combinations thereof.

Availability ..... Now, OEM only
Medium .... Plastic PCMCIA cases
Pricing ..... Please call
CONTACT: *Shape Technology, 2105 S. Bascom Avenue, Suite 336, Campbell, CA 95008, USA; Phone: 800-462-4165 or 408-369-8136; Fax: 408-369-8066.*

Printers

95LX 100/200LX

Citizen PN60 Ultra Portable Printer

This 1.5 lb (with battery) printer comes with a RS-232 serial port and can connect to the HP Palmtop with an optional serial cable and gender changer or custom serial cable from Shier Systems & Software (see product description, page 9).

The PN60 prints up to two pages per minute at 360x360 dpi resolution and emulates Epson LQ and IBM ProPrinter drivers (options available on the HP Palmtops). It comes with resident Roman, Courier, San Serif, Orator & Script fonts. The Citizen PN60 can print 30-40 pages per fully charged battery. It handles regular cut sheet paper, envelopes, labels and transparency film.

The PN60 comes standard with an international AC adapter/charger and has an optional NiCad battery and optional car adapter. The printer comes with a standard 2 year warranty, and has warranty extension options. *(See review, page 18.)*

Availability ..... Now
Pricing $399
NiCad battery $79
Car adapter $49
CONTACT: *Citizen America Corporation, 2450 Broadway, Suite 600, Santa Monica, CA 90404-3060, USA; Phone: 310-453-0614; Fax: 310-453-2814.*

95LX 100/200LX

PocketJet Printer

This 17 oz, battery-powered printer comes with serial and parallel ports, so you can easily connect it to your HP Palmtop or Desktop PC. (See related product: custom PocketJet/Paltmop printer cable, page 9.)

The PocketJet uses "direct thermal" printing technology, producing 300x300 dpi, laser-quality output on special Pentax thermal paper.

The PocketJet features full LaserJet IIP (PCL 4) emulation and prints up to three pages per minute, 30-35 pages per battery charge. You have to use Pentax thermal paper with this printer, but do not need ink cartridges or thermal ribbons.

The Pentax PocketJet printer comes with a rechargeable Ni-Cd battery, Centronics parallel interface cable (serial cable optional), AC adapter/battery charger, Thermal paper (100) sheets, Carrying case, DOS print utility program, Quick reference card, and a Users' guide & supporting documentation. *(See review, page 17.)*

Availability ..... Now
Pricing
PocketJet $499
Serial interface $25.99
Paper (100 sheets) $7.99
CONTACT: *Pentax Technologies, 100 Technology Drive, Broomfield, CO 80021, USA; Phone: 800-543-6144 or 303-460-1600; Fax: 303-460-1628; BBS: 303-460-1637.*

Software

Health Care

100/200LX

HealthProbe

The HealthProbe® HNPR Prescription Writer keeps tabs on patients and their active and past medicines and automates the process of writing a prescription. It provides you with over 1,000 medicine variations (you can add more if you like) and customizable combinations of these medicines. Lets you print prescriptions to Epson FX or HP Laserjet compatibles. You can also send a prescription directly to the pharmacy via modem. 2MB or more of RAM storage recommended for data.

Availability ..... Now
Medium ..... Floppy disk
Pricing $99
CONTACT: *HealthCare Data, 5311 Mount Pleasant North Drive, Greenwood, IN 46142, USA; Phone: 317-887-1326.*

Programming

100/200LX

Card BASIC

Create fast, compact card-based applications for your HP 100/200LX or PC. Card BASIC supports advanced graphics using CGA or VGA. Its visual interface includes font/icon windowing. Good language for engineering/scientific programs or PCMCIA card products. Disk includes program editor, onscreen help, documentation in text file. Free Information Kit available.

[See Advertising, page 35.]

Availability ..... NOW
Medium ..... Floppy disk
Pricing $19.95
CONTACT: *MicroGram Systems, P.O. Box 252, La Honda, CA 94020-0252, USA; Phone/Fax: 415-747-0811 (call before sending fax).*

95LX 100/200LX

ExpertHelp for Programmers

ExpertHelp is a TSR hypertext help facility targeted to any DOS programmer using C, Basic, Assembler, Pascal, Clapper, D-Base, etc. ExpertHelp enables you to have hundreds of language-specific function descriptions, ASCII charts, keyboard scan codes, color charts, ROM BIOS addresses, etc, available at a single keystroke. This reduces the programmer's dependence on a raft of manuals.

ExpertHelp is 100% compatible with the Norton Guides and supports Text Cut and Paste, Global Searching, 25/28/43/50/60 line video modes, mouse control and more.

The SofSolutions BBS has over 70 ExpertHelp databases available free to ExpertHelp users, including Borland C, Microsoft C, Assembler, Netware, Clipper, and D-Base.

[Those involved in the PAL project discussed in the programming section of CompuServe's HP Hand forum, can receive a discount on the product. This product is of interest to those writing programs for the HP 95/100/200LX, but does not necessarily work on those machines.]

Availability ..... Now
Medium ..... Floppy disk
Pricing
Retail $129
PAL project participants ... $59
CONTACT: *SofSolutions; Phone: 800-325-6820 or 402-332-5611; Fax: 402-332-5617; CompuServe ID: [72500, 1452].*

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Includes: General Management, Overdoses, Antidotes, Drugs of Abuse, Occupational Exposures, Plant Identification and Poisonings, General Toxins and a list of Poison Control Centers.

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Includes: Diagnosis and management essentials of all Fractures, Sprains, Ligament and Joint Injuries and Infections. Plus, Orthopedic procedures.

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HP200LX Computer: (1MB $499) (2MB $679)
Connectivity Pack: $99
Data Cards*: 3/6 MB $269, 5/10 MB $319, 10/20 MB $479, 20/40 MB $799
*$50 off any one RAM card ordered with PEPID databases.

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- **Fax to:** (708) 475-0779
- **Write:** **PEPID, Inc.**
100 Greenwood St.
Evanston, IL 60201-4712

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Conferences

95LX 100LX

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Location ..... Dates, 1995
New York, NY ..... Mar 9-10
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CONTACT: *Laptop Expositions, 104 East 40th St., #802, New York, NY 10016-1801, USA; Phone: 800-444-EXPO or 212-682-7968; Fax: 212-867-8277.*

95LX 100/200LX

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Dates ..... June 6-8
Location ..... Dallas, TX USA
Pricing ..... varies
CONTACT: *Mobile World; Phone: 508-470-3880; Fax: 508-470-0526; E-Mail: DCIconfl@aol.com.*

Upgrades, Notices

100/200LX

100/200 Buddy, version 2.0

Buddy™ is a feature-rich utility for HP 100/200LX (English-language displays) that adds dozens of keystroke shortcuts and other options to the built-in applications, making it easier to use. Version 2.0 runs on both the HP 100LX and 200LX, and will operate correctly with font-changing programs such as FCL and HELV200.

Buddy's features include:

- Highlight data file in FILER and press ENTER twice to start the appropriate application and load the file.
- Double-click a letter or keypad key to obtain its shifted value.
- SmartCaps™ automatically and appropriately produces upper-case letters as you type text. (Now capitalizes umlauts and accented characters and is no longer confused by abbreviations.)

Additional features in the latest version include:

- Adds user password logic that lets you specify that password be required whenever the power is turned on, or only if the machine has been off for longer than a specified period of time.
- Set up separate macro files for each application and automatically changes macro files when application started. Lets you run a specific macro automatically at startup.
- Provides visual warnings in Filer when battery usage timer or voltage sensor reach specified values.
- AutoCalc automatically starts HP Calc if you enter a number immediately after turning the power on.
- WorldTime map overlay displays the day/night terminator plus any great circle route on the WorldTime map (registered copies only).
- Automatic indent feature in Memo.

Registered users of 100Buddy version 1 may upgrade at no additional charge except $5 for a diskette if it is needed.

Unregistered versions of Buddy 2.0 are available in the CompuServe HP Hand forum or on *The HP Palmtop Paper ON DISK*. Registered versions are available from the author.

Availability ..... Now
Medium ..... Floppy disk
Runs under SysMgr ..... Yes
Pricing (add $5 for diskette)
Registered version/
shareware fee $40
CONTACT: *Jeffrey Mattox, P.O. Box 45282, Madison, WI 53744-5282, USA; CompuServe ID: [71044,2356].*

100/200LX

{COMMO} 6.41

{COMMO} is a small, fast, and reliable terminal program for DOS, Windows and OS/2. It provides a comprehensive macro programming language. This new version includes INTERNAL Z-MODEM, macro compiling, greater speed and many more enhancements. {COMMO} is a shareware program that works on the HP 100/200LX, but not on the HP 95LX. (See Shareware/Freeware index, page 56 this issue.)

95LX 100/200LX

DERIVE 3.0: Mathematical Assistant

A major new release of Soft Warehouse's "Mathematical Assistant" software includes Boolean algebra; integer and nonscalar variable declarations; subscripts; polynomial quotient, remainder and gcd functions; and Taylor series approximation functions. The DERIVE plotting feature has been enhanced by the addition of implicit plots, autoscaling, trace mode, "zoom" boxes and 3D plot animation using AcroSpin. New predicate, generator and selector functions make it easy to write function definitions that are short and efficient. DERIVE 3.0 lets you print out annotated sessions and comes with an improved user interface.

The new version of DERIVE must be downloaded to an HP 95/100/200LX from a desktop PC. Once downloaded, DERIVE automatically adjusts its display size and configures for minimum battery usage.

Availability ..... Now
Medium ..... Floppy disk
Runs under SysMgr ..... No
(Requires 1MB of RAM on Palmtop)
Pricing $125
Upgrade $60
CONTACT: *Soft Warehouse, Inc., 3660 Waialae Ave, Suite 304, Honolulu, HI 96816, USA; Phone: 808-734-5801; Fax: 808-735-1105.*

100/200LX

Discount for Aztec C

This small C compiler was mentioned in Sept/Oct 94, page 53. Manx Software Systems is offering their Aztec C Developers Package to Palmtop Paper readers at 50% off. The package includes compiler, assembler, linker, and Unix-like utilities including a VI editor. The package normally sells for $299.

Availability ..... Now
Medium ..... Floppy disk
Runs under SysMgr ..... No
Pricing $149.50
CONTACT: *Manx Software Systems, Inc., P.O. Box 980, Freehold, NJ 07728, USA; Phone: 800-221-0440 or 908-308-3800.*

ON DISK Index: pg 56

REVIEWS

Portable Printers and Fax/ Modem & Flash Memory cards Lighten the Travelers Load

When you're on the road, smaller is better. Bulky peripherals mean bigger carrying cases, and every extra pound drags you down. This new field of diminutive printers and fax/modem & flash memory cards will help lighten your load.

By David Shier

While the HP Palmtops have completely replaced a laptop or notebook computer for my traveling, my "mobile office," including modem and printer, still takes up the better part of a pilot's case. I have wanted to reduce the bulk of the latter two items for some time, and have longed for a smaller combination PCMCIA fax/modem & flash memory card and a smaller, serial printer.

I have been using an external pocket modem instead of a PCMCIA card modem because I need a lot of file storage space for CompuServe messages and must use the Palmtop's card slot for a memory card. Unfortunately, the pocket modem and its serial cable are too big for my Palmtop's carrying case. What I needed to simplify my life was a PCMCIA card modem with Flash memory on board. This would allow me to keep the messaging software on the card along with fax and modem messages.

I also carry a three-year old Citizen PN48 printer with me when I travel. This 2.6 lb printer is about the size of a rolled up newspaper. The printer comes with a parallel interface only, requiring an additional serial-to-parallel converter to connect it to the HP Palmtop. While small and light for a full page printer, it still takes up more space than the rest of my mobile office. A smaller, lighter printer with a serial interface was also high on my list.

With all this in mind I attended the November 1994 Comdex show in Las Vegas. There I was delighted to find two new light-weight portable printers with serial interfaces and two new PCMCIA fax/modem cards that came with onboard flash memory. These new products promised to simplify and lighten the burden of my mobile office.

LEFT: HP 100LX with EXP ThinFax/Flash memory card in slot and Pentax PocketJet printer connected to serial port. RIGHT: HP 200LX with SmartModular SmartModem/Flash memory card in slot and Citizen PN60 printer attached to serial port.

ABOUT THE AUTHOR

David Shier is a former software engineer, and a marketing and sales director in the electronics industry. He is now President of SHIER Systems & Software, a company dedicated to developing and marketing custom products and applications for the palmtop computer market. David can be reached at: SHIER Systems & Software, 920 Hampshire Road, Suite A, Westlake Village, CA 91361, Phone: 805-371-9391, Fax: 805-371-9454; CompuServe ID: [75030,3374].

The fax/modem & flash memory cards

Ever since the first PCMCIA modems started appearing for the HP Palmtop computers, users have wished for additional Palmtop disk space. The software that came with the earlier cards tended to take up a lot of disk space and sometimes did not fit on the Palmtop's C drive. In addition, the faxes and e-mail users received quickly filled up the C drive.

The first, and only, PCMCIA modem card developed for the HP 95LX Palmtop was the PalmModem from New Media. It had its own fax and data communications software built into the card, saving precious C drive space for messages. However, the card had to be used with that software, and could not be used with popular communications programs such as fastCOMM! and acCIS.

The HP 100LX and HP 200LX Palmtop computers support standard PCMCIA modems, which makes them far more versatile. However, most PCMCIA modems are designed for use in laptop and notebook computers. These computers have plenty of hard drive storage space available. The need for card modems with on-board memory and built-in software was not apparent, until the voices of Palmtop users began to be heard by the industry.

The first two PCMCIA fax/modem & memory combination cards to emerge are from Smart Modular Technologies, and EXP Computers. The cards are specifically designed for the HP Palmtops. Both cards solve the basic dilemma of the single PCMCIA slot in the HP Palmtops by providing both fax/modem and Flash memory on one card. However, each card provides unique features that must be considered.

Similarities between the two fax/modem & flash memory cards

Both cards allow you to run fax or data software from the memory portion of the card while using the modem. They each come with fax send and receive programs preloaded on to the Flash memory. While the fax/modem portion of both cards will work on other PC's equipped with a PCMCIA slot, the flash memory of both cards only works on the 100/200LX. (EXP is compiling a list of computers with PCMCIA slots that can use the memory portion of their card. They are also updating their drive for greater compatibility.)

At this time neither card comes with separate data communications software. Both cards have a built-in phone line interface, so no large external connector "pod" is needed.

Installation for either was simple: as close to "plug and play" as you

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can expect from such a device. Both cards require a driver program to be loaded from the CONFIG.SYS file in order to run. Both provide an installation program to copy the driver to your C: drive and to modify the CONFIG.SYS file automatically. Unfortunately, the current Smart Modular card only allows you to run this installation procedure once. After that, the installation files are no longer accessible. This limitation is not mentioned at all in the sparse documentation and needs to be more clearly defined. (More on this below.)

I ran the acCIS CompuServe access program without a hitch on each card. I also ran the America On Line software for the 100LX on the Smart card and Tapcis on the EXP card. (I did not try the other combinations but have no reason to believe that they would not work together.)

The real surprise was running the America On Line software. I was told that this software had never worked on a PCMCIA modem before. I simply installed the AOL software using the instructions provided by the AOL PDA/Palmtop forum leaders, and logged onto the service.

The Smart Modular Fax/ Modem & Memory card

The Smart Modular card is available with 2M, 4M or 6M of on-board flash memory. The modem speed is 14400 bps for sending faxes, 9600 for receiving faxes, and 2400 for data transmission. Given the slow data modem speed, this card is best suited for users who will be using the fax feature and/or communicating interactively with a host computer. Since interactive communications speeds are generally limited by the user's typing speed, the slow data rate would have little impact.

On the other hand, if you have to download large files from an on-line service where you pay for connect time or long distance telephone charges, a slower data rate would translate into higher connect and/or phone charges.

The Smart card appears very well

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constructed. The phone cord connector on the end of the card is a bit more rugged than the one on the EXP, but it is also larger.

As noted above, the on-board software only allows the installation procedure to be run once. I made an error during installation (I left the driver for the other card installed) and assumed that I could simply delete all the files and try the install procedure again. This was a big mistake since the files were no longer available on the card. No backup diskette was included, so you might want to back up the install program and the SMDRIVER.SYS file before running installation. I was able to use the SmartModem to access SmartModular's BBS system to download the required driver file. (The modem part of the card can be used without the SmartModem system driver, SMDRIVER.SYS, installed. With the card in the slot all you need to do is add `D:\BIN\CIC100.EXE /GEN 1` to your AUTOEXEC.BAT file, and reboot the Palmtop.)

SENDING AND RECEIVING FAXES ON THE SMART MODULAR CARD

The Smart card comes with a special version of BitFax software for DOS preloaded. The software user interface could be more "user friendly" but does work. This software looks like it was originally designed for a computer other than the Palmtop. For example, when viewing faxes, the default screen mode is reverse video (white text on a dark background) which requires you to press ON-/ to have a normal view. For other than viewing faxes, BitFax uses the 40x16 column display. Also, I was unable to print faxes using this software (I continued to receive an error message "error opening file" but was unable to determine which file it could not open.) It should be simple for SmartModular or a third-party developer to improve this interface and make it better match the design of the Palmtop's software. The most important improvement would be to provide default settings that eliminate the current need to cycle through every parameter setting each time you run the software.

The good news is that this software is stored on the flash memory portion of the card, so future updates can be loaded by the user, or other fax programs can replace it. Despite the awkward software controls and the minimal documentation, sending and receiving faxes proved to be very easy.

QUALITY OF FAX

A fax program converts text to a graphics dot pattern to be transmitted. The quality of the fax you receive at the other end is dependent on the quality of the fonts used by the fax program to convert the text to graphics. The SmartModular software produced characters that were clear and easy to read (more so than the EXP software). Also, the SmartModular software automatically sent through enough blank space to force the receiving fax machine to cut the paper at the standard 11 inches. In contrast, the EXP ended the page shortly after the last line of text, saving fax paper, but causing the receiving fax machine to cut the page at an odd size. I prefer having messages on standard sized sheets of paper and favor the method chosen by Smart Modular.

The SmartModem card is rated to receive faxes at 9600bps (bits per second), the EXP is rated to receive at up to 14400bps. However, the SmartModem actually required less time to receive a page of text. To get an idea of what was happening, I watched the sending fax machine as it sent a fax to the Palmtop. When sending to the SmartModem card, the paper on the sending fax machine fed through without slowing down. When sending to the EXP modem/flash memory card, the sending fax machine paused often, slowing the transmission time. I assume that this pause occurs when the EXP card is writing the data to the file. The SmartModem card receives data at a slower rate, but may buffer data better than the EXP card.

The EXP ThinFax 1414LXM modem/flash memory card

The EXP card had not been released when I wrote this article, but EXP provided a prototype card for review purposes. The EXP card comes with either 2MB or 4MB of flash memory. The modem speed is 14400bps for both faxing and data. (Editor's Note: EXP is now shipping both 2MB and 4MB cards. See product announcement, page 10 this issue.)

While the EXP modem has a major advantage in data communications speed (14400bis vs. 2400 for the Smart) it draws more power from the Palmtop. The Smart card goes to standby mode within half a second of powering up on the Palmtop. The EXP waits 10 seconds before lowering the power to the modem. While 10 seconds may not seem like much time, this occurs every time you turn the Palmtop on. If you tend to use the LX for quick reference, turning it on many times a day for brief periods, then you may find the EXP to be a significant drain on the batteries. Also, while both cards have rather small drivers that must be loaded, at 7KB, the EXP driver is over twice the size of the Smart driver.

The EXP comes with their MiniFax software. It is System Manager compliant (an .EXM) which looks just like the built in applications and is a great example of how software for the HP 100LX and 200LX should be designed. I found this software very easy to use despite the fact that my evaluation card was provided without any documentation. A particularly nice feature is the fax transmission log that listed all faxes sent or received. You can view or print any received fax by selecting it from the listing.

While more than acceptable, the quality of the EXP's transmitted fax was not as good as that of the SmartModular's fax, but since I prefer to use CompuServe to send faxes, this was not an important issue to me. Instead, I directed my attention to the use of this card for high-speed data transfers. I used this card with the

CompuServe access program, acCIS, for over a month. Carrying a telephone cord in my Palmtree leather case, in the pen slot, was very convenient. This enabled me to log into CompuServe from anywhere, and with plenty of room for storing messages and files.

Which card wins?

Both of the cards reviewed have strengths and weaknesses. Your needs will dictate which is best for you, but I can honestly say that either card should make any HP 100LX or 200LX owner quite happy.

If you need to send and receive faxes and engage in interactive, online communications, then the SmartModular card may be for you. It's a little better on battery life and the speed and quality of the faxes. (Remember that both combo cards will draw more power than flash or SRAM memory cards.)

On the other hand, if you intend to transfer large amounts of data, or use a program such as acCIS (that transfers data as fast as the modem will allow), then the EXP's ability to run six times faster in datacommunication makes it a better choice. With CompuServe lowering their connection time charges for faster data rates, the extra speed of the EXP modem can be directly translated into lower forum access costs.

[CompuServe connect charges changed: Effective Feb 5, access at 9.6 and 14.4 kilobits per sec droppped by 50% to $4.80/hr. The monthly membership fee increased by $1 to $9.95 and now includes free access to the Executive Service Option. (ESO surcharges for specific products continue to apply.) CIS eliminated the Western Europe prime-time communications surcharge and cut by 31% the U.S. Wide Area Telephone Service surcharges. The Canadian WATS-line charge were be cut by 41%.]

Bantem-Weight Portable Printers

Hewlett Packard has developed many innovative products such as the Palmtop computers, the LaserJet and DeskJet printers. One of the reasons for this creativity is that it operates each division as though it were a separate company. However, this can result in lack of integration between products from different HP divisions. For example the HP Deskjet Portable 320, an excellent printer, is quite large, and only has a parallel interface. Since the Palmtops only have a serial interface, you can't directly connect these two portable HP products together. A serial-to-parallel converter is required to use this printer with the Palmtop. Fortunately, two competitors, Citizen and Pentax, have introduced new printers that address the needs of the Palmtop user much better than HP's offering.

Pentax PocketJet Printer

When I first heard about the Pentax PocketJet, I was not very enthusiastic. I had envisioned this thermal printer's output to look like those dreaded faxes that curl up on your desk and can't be fed into a copying machine. Once I received the evaluation unit I was pleasantly surprised.

First, this printer has a quality look to it. It is amazingly small and

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Pockets for PCMCIA I, and business cards | | 3 | 4 | 4 | 8 | 8
Pocket for checkbook, etc. | | ■ | ■ | | ■ | ■
Computer can be attached via Velcro (included) | ■ | ■ | ■ | ■ | ■ | ■
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very solid (10" x 2.2" x 1.2"). At about 26 cubic inches, this printer is just under the volume of the HP Palmtop itself. The printhead covers the full width of the paper, so the only moving parts are those that move the paper through the printer. True to its heritage, the PocketJet looks like a fine piece of photographic equipment, and includes a high quality carrying case. The list price for the Pentax PocketJet is $499 including the AC adaptor/charger, battery and case (spare battery $38).

The PocketJet requires special thermal paper that comes in packages of 100 sheets, weighing about one pound, for $7.99 (one package is included with the printer). This gives the PocketJet a fixed printing cost of $.08 per page. Pentax provides an 800 number, 800-543-6144, to order paper or to find a local dealer that stocks it. (Since the printer is new, it may be difficult to find a local dealer, so allow enough time to receive your paper directly from Pentax.) You can make do with regular fax paper in a pinch, if you run out of the Pentax paper. However, the Pentax thermal paper produces better results than regular fax paper.

The Pentax paper is much thicker than thermal fax paper. Since it comes in flat sheets, you don't get the curly memos that we are familiar with from fax machines. While I was pleased with the output, you must remember that this is thermal paper and is therefore subject to fading after long exposure to ultraviolet light (such as sunlight). Also, Pentax recommends avoiding allowing the PocketJet paper to contact blueprint and carbonless papers, vinyl or acetate (such as notebook covers), and organic solvents, oils or ammonia. As I have rather oily skin, I have found that excessive handling of thermal paper tends to cause fingerprints and smudged printing.

The printer emulates the HP LaserJet IIP (PCL4). Since the Palmtop has built-in support for the LaserJet, the setup was easy. It also prints much like a laser printer - receiving a complete page of data before printing anything, then printing the complete page all at once.

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I also have a Citizen PN48 printer. It is
up newspaper. The printer only provides a
connecting it to the HP Palmtop requires
converter. While quite small and light
(especially considering it is about


I also have a Citizen PN48 printer. It is
newspaper. The printer only provides a
connecting it to the HP Palmtop requires
converter. While quite small and light
(especially considering it is about
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(Top) Pentax PocketJet Printer output. (Bottom) Citizen PN60 Printer output.

An important feature of this printer is its built-in RS-232 interface. [Editor's note: Shier Systems & Software will provide a special cable ($35) to directly connect the Pentax printer to the Palmtop (see the photo on page 13.), without extra adapters. This cable fits in the sleeve of the Pentax carrying case.]

Although I was not able to benchmark the decibal levels of either printer, both were acceptable in all but library situations. The PocketJet was noticeably quieter than the Citizen PN60.

The power, paper feed and battery charging of the PocketJet are controled by a single button on the top of the printer. A separate dial on the side controls the print density. There are three small indicator lights on the top of the printer that display up to 13 different status conditions of on, off or blinking lights! Fortunately, a sticker on the bottom of the printer explains the various conditions indicated by the lights and Pentax provides a quick reference card that fits in a outside pocket of the carrying case. Still, I would prefer more intuitive indicators and controls.

As their first entry in the consumer portable printer market, Pentax's new PocketJet printer is a serious contender.

Citizen PN60 Pocket Printer

The Citizen PN60 represents the third generation of battery-powered portable printers from this veteran of the portable printer market. The improvements incorporated in this 'grandchild' of my old PN48 clearly show Citizen's experience.

While not as small as the Pentax, the PN60 is tiny and light. With the optional battery attached, the printer weighs less than 1.75 lbs. (about 1 lb. without the battery.) The list price of the Citizen PN60 is $399 including the AC adaptor/charger (optional battery is $79).

This printer uses a ribbon and prints on plain paper, using a 'thermal fusion' method. In thermal fusion, the ink is transferred to the paper under heat and pressure. The 'ink' is a plastic coating on the ribbon, which will not come off on your hands if you touch the ribbon. While these ribbons are about half the size of the PN48 ribbons, they can print about 50% more. However, even with the longer ribbon life, this is still an expensive printer to operate. The ribbons cost $9.00 per package of two, and each ribbon can print about 25 pages of text or about 18 pages of graphics (depending on density). This works out to about $.16 per page. In discussing the operating cost, I should note that I never found this to be a significant factor in my experi-

ence with the PN48. This is because I don't expect the light weight printer to replace my desktop printer. I use it only for printing while traveling. In this case, the costs are easily offset by the convenience of the small size and weight.

While the earlier printers came standard with either a parallel cable, or an Apple Talk (RS-422) cable, as with the Pentax, Citizen added an RS-232 serial interface to the PN60. [Editor's note: Sheir Systems has also designed a cable ($42) to directly connect the PN60 printer to the Palmtop (see photo on page 13). EduCALC will be providing the PN60 and custom cable as a set.]

The PN60 is controlled by a set of four buttons on the top. When setting the configuration, a page is printed showing the current settings and instructions for changing the configuration. A group of five LEDs are used to indicate various conditions and configuration changes. While I feel that this design is a bit more straight forward than the Pentax single button control, some basic functions (such as controlling the darkness) are not obvious.

The best feature of this printer is the ability to print on plain paper and transparency film. By carrying a few pages of company letterhead, it is possible to print formal letters. If you give presentations using overhead projections, it is possible to print last-minute updates while on the road. Another advantage to its use of plain paper is that you don't have to worry about running out of special paper half way through a road trip. (A box of Pentax thermal paper adds about a pound to your briefcase.) You can use just about any standard cut sheet you find. However, highly textured paper does not allow the ink to be transferred as well as smoother paper. This is a consideration when choosing paper for your own letterhead.

The ribbons are small and light enough to carry a couple of extra with you. I should mention that you can purchase color ribbons for the PN60. This provides full color output when used with appropriate software. Unfortunately, I was unable to find any software to run on the Palmtop which supported this option. (If you run into any, let us know.) Also, at a cost of up to $4.00 a page, this option is intended only for those situations where you need a color page for a presentation and don't have access to any other printer.

Citizen has used all of its experience to bring out a printer that meets the challenge.

Which printer is for you?

As with the modem/fax cards, it was not possible for me to choose a single printer that is right for everyone. Instead, I once again found that the selection between these two contenders greatly depends on your needs.

Since its operating cost is about half that of the Citizen, the Pentax is well suited for field service representatives and other mobile users that need ready access to a printer, but do not need plain paper copies or output that can be permanently saved. The low cost per page should also make this printer attractive to those that need to print a large number of pages while traveling. The Pentax is also smaller.

The Citizen PN60 is well suited for low volume high quality printing on standard letterhead, transparencies or plain paper that's readily available. The mobile executive or sales professional who needs to produce documents on company letterhead or high-quality cut sheet paper (and possibly color) will find that the Citizen PN60 is up to the task.

Product Index: page 55

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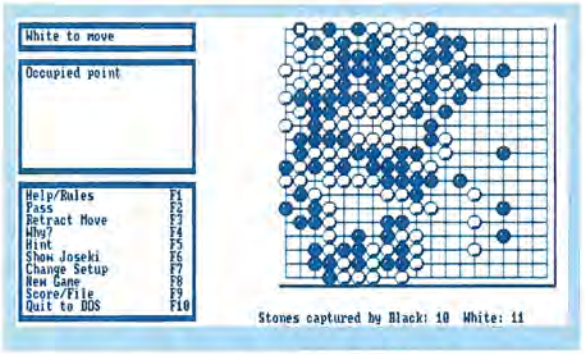
Let the Games Begin!

If you're ready for some serious fun, out of the hundreds of games you can play on the HP Palmtop, here's the run down on some of best.



Ancient Game of Go (mentioned in Publishers Message).

[Editor's Note: Contact information for the commercial software mentioned in this article is found on page 55. Information for the shareware/ freeware is found on page 22.]

By Capers Jones

The Hewlett-Packard HP 100/200LX Palmtop computers were not designed as game machines but they do an acceptable job in this role. There are probably over 100 games available that will work on the HP 100/200LX computers, including adventure games, board games, card games, sports simulations, and games developed for the computer environment only, like Tetris, Space Invaders and the like. I prefer classic board games such as checkers, chess, and backgammon or card games such as gin rummy, solitaire, and poker.

To run on the 100/200LX a program needs to support CGA graphics (or use Monochrome text), an 8086 CPU (not 286, 386 or 486) and 640K (or less) system memory. Flight simulators and the like requiring too much in the way of really quick keyboard action are difficult to play. (See letter on page 5 for comments on other filght simulators and games.)

Since the HP 100/200LX computers only weigh 11 ounces, and I don't like to add to that weight, I don't install games that have copy protection schemes requiring the user to carry around a manual or coding device for access codes.

Sources of games for the HP Palmtop computers

One of the unexpected advantages of the 100/200LX's somewhat limited graphics support (CGA only) is that many interesting games can be found in the sale and close out bins, and shareware sections of toy stores, department stores, and computer stores. I've bought more than a dozen excellent games for between $5 and $10 that were originally priced at $25 to $50 when they first came out.

Another good source of games are the library sections of various on-line information services such as America On-Line, CompuServe, Prodigy, the Internet, and various local bulletin boards. For example, the HP Handheld forum on CompuServe has at least 15 games available that are already tested for the HP Palmtops. Some of these are shareware, requiring registration and payment of a fee, but some are freeware and can be used with out any cost.

Also, the IBM user forum on CompuServe has more than 250 games in their libraries, categorized into meaningful sections such as card games, word games, sports simulations and the like. Many of these games won't work on the HP Palmtops because they are too large, need VGA graphics, or have some other features that are incompatible. However, even if only 10% of the games work that is still a pretty rich source of entertainment.

There are also a number of games available from companies that specialize in products for the Hewlett-Packard handhelds, such as EduCALC and Ace Technologies. In addition, many shareware and freeware games are offered on *The HP Palmtop Paper ON DISK* and *The HP Palmtop Paper Subscriber's PowerDisk*. Some of these games are available in PCMCIA card format, and plug directly into the HP's PCMCIA slot. most are available on disk.

Installing games

Many of the games found on-line or on shareware disks are distributed in compressed files. Most often they will be in a .ZIP file. You will have to use one of the utility programs, like UNZIP to extract the files from this compressed format. In this article, I assume you already know how to do this.

My approach is to download the games to my home desktop computer, then check the downloaded material for possible viruses. You cannot be too careful about virus protection. I normally use the HP Connectivity Pack for transferring games from my desktop PC to the HP 100/200LX. The HP Connectivity Pack is sluggish for large files, but easy to operate.

I've found that roughly a third of the games I look at won't install properly on the Palmtop for various reasons. For example, sometimes I'll install a game on my desktop PC and copy the installed files over to the Palmtop. The initial installation pro-

ABOUT THE AUTHOR

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cess configures the game for the computer they are first installed on. When the game is copied to the Palmtop, the configuration is no longer valid and the game fails. If a game does not install properly after a few tries, I give it away or scrap it.

Board games

The HP Palmtop computers do an excellent job on board games. This is because many board games use only two colors, so black and white monochrome displays are fine. In addition, many board games have simple movement patterns, so the key strokes needed for movement are straightforward.

I prefer graphics-based board games because the display looks better than those using character graphics. Here are some examples that work fine with the HP screen:

Backgammon

Many backgammon games are available from bulletin boards and other sources. One such program is BACKGM.ZIP. Another program that looks very good on the HP 100/200LX screen is **PC-Gammon** from Micro Star's Casino Games disk. This is a standard backgammon game that uses a fairly convenient set of keyboard commands for movement. It is not terribly sophisticated in terms of playing skill, but then neither am I. The executable file and user guide total to about 125K of storage.

Checkers

For some reason there are not as many computer-based checkers games as there are chess games. **CHKRS95.EXE**, a checkers game made for the 95LX, works on the 100/200LX. In addition, there is a graphics-based checkers game called **Lets Play Checkers** by Don Lundman that works very well on the 100/200LX screen. The graphics are very clear on the Palmtop screen, and the movements by keyboard are very easy to learn. This game has multiple skill levels, and can play either like a novice or a pretty good player. The executable file and user document for this shareware total to about 105K.

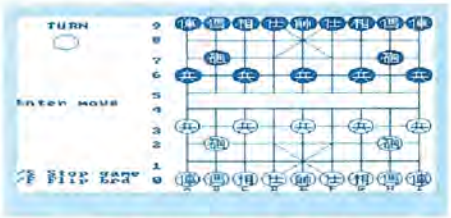
Chess

Here too there are several choices available, **EdChess**, in EDCV23.ZIP, among many others. One that does a good job on the HP 100/200LX is **Powerchess**, a shareware program by Wild H. Heiss. The graphics are fine (once you get used to the fact that the board is a rectangle and not a square).

The movement keys are very natural and easy to get used to. This game offers multiple skill levels, and can even solve chess problems. I'm not a ranked chess player so I don't know how well Powerchess plays at the higher skill levels except that it can often defeat me. For a casual game on an airplane, the skill levels are fine. Executable files, documents, and game files total to about 150K.

Chinese Chess

The HPHAND forum on CompuServe has two versions of **Chinese Chess** available, in CCHESS.ZIP. One runs on the HP 100/200LX and the other on a desktop PC. The rules and the board are rather different from normal Western chess, but enthusiasts claim that it is a faster moving game that is very enjoyable.



Chinese Chess screen

I don't know the rules well enough to play a full game. However, I downloaded and ran the HP Palmtop version. It seemed to work fine and its executable files and user documents total about 100K.

Scrabble

Scrabble, from Virgin Interactive Entertainment, plays very well on the HP 100/200LX, and the graphics are

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quite good. I found this game in a department store close-out bin for less than $10. The only problem with this game is that movements using the keyboard are a little cumbersome since the game was created primarily for use with a mouse. This is a big game and all of the various files total to roughly 300K. If you store the whole dictionary with definitions, then that would add about another 400K. It's not necessary to use the dictionary with the Palmtop since the definitions are terse and the game plays fine without the meanings.

Other Board Games

A number of other board games are available that will probably work on the HP Palmtops, but which I have not personally tried. Some of the board game titles I've seen on shareware disks and in forum libraries include Chinese checkers, Go, **Monopoly**, Parchisi, Othello (**Reversi**), Shogi or Japanese chess, and Trivial Pursuit.

Card games

The HP 100/200LX are very good computers for card games, and quite a few are available. It's important to consider whether the designer created the game to be played primarily using keyboard commands (good for Palmtop users) or a mouse (not as good). Following are some of the card game programs that I've seen and tried:

Blackjack

Blackjack is a fairly easy game to simulate, and there are perhaps a dozen or more shareware versions available. Some of the more sophisticated versions also include various counting systems, tutorials, and aids for becoming a better blackjack player. To me, blackjack on a computer has very little appeal. I've tried out quite a few versions but only to see if they can be downloaded and work successfully which most have done. The storage ranged from about 25K to more than 50K. [Editor's Note: We've included on the *HP Palmtop Paper ON DISK*, **BJ.EXM**, a 95LX system Manger version of blackjack which installs in the Application Manager on the 100/200LX and requires 12K.]

Bridge

Although I don't play bridge myself, I've seen a number of bridge simulations available. For example, the HP Handheld forum on CompuServe has a bridge simulation called **BridgePal** in its library, which can be played by one or two players and takes about 250K of storage.

Cribbage

Different versions of Cribbage are available, including **CRIB.ZIP** from the HP Handheld forum on CompuServe.

Another version of Cribbage, **Cribbage King**, is available on the Software Toolworks (now Mindscape, Inc.) CD Game Pack I, which also includes gin rummy. Note that only the CD ROM version of Toolworks lets you downloaded these games to the HP Palmtop. The disk-based versions were all copy protected.

Once loaded, the cards of the Toolworks version display nicely and the keyboard movements are straight forward. Storage for the necessary files runs to about 175K.

Gin Rummy

There are perhaps half a dozen gin rummy games available as shareware or down loadable from forum libraries and bulletin boards. Software Toolworks' CD ROM version has a gin rummy game, **Gin King**, that works well on the HP Palmtop, but remember that only the CD ROM version will download to the Palmtop. File storage for this version runs to about 180K.

Poker

There are several very good shareware and commercial poker games available that work very well on the HP 100/200LX machines. One that plays well is a shareware game called **Vegas Johnny's Draw Poker** by Micro Star. This is a very good rendition of

Special Games Edition of The HP Palmtop Paper ON DISK

The games listed below are available on a special two-disk issue of *The HP Palmtop Paper ON DISK*. This special ON DISK issue also includes other shareware and freeware mentioned in this issue like Buddy 2.0 for the 100/200LX, the updated HELV200 font program, and the TIPI programming language. Freeware programs are available at no additional charge. Shareware programs are available for trial purposes only. If you want to continue using a shareware program you have to pay a registration fee (usual $5-$30) to the author of the program.

File Name	Description	CIS forum/Library	Type	Page
ADV100.ZIP	Adventure games (100/200LX)	HPHAND/100LX New, 8	Free	24
ADV95.ZIP	Adventure games (95/100/200LX)	HPHAND/95LX Gen, 7	Free	24
BACKGM.ZIP	Backgammon (100/200LX)	HPHAND/100LX Gen, 11	Free	21
BJ95.ZIP	BJ.EXM, Blackjack (95/100/200LX)	HPHAND/95LX Gen, 7	Free	22
BRIDGE.ZIP	Bridge Pal (100/200LX)	HPHAND/100LX Gen, 11	Share	22
CCHESS.ZIP	Chinese Chess (100/200LX	HPHAND/100LX Gen, 11	Free	21
COLOSS.ZIP	Colossal adventure (100/200LX)	HPHAND/100LX Gen, 11	Free	24
CRIB.ZIP	Cribbage (100/200LX)	HPHAND/100LX Gen, 11	Free	22
DUNGEO.ZIP	Dungeon (100/200LX)	HPHAND/95LX Gen, 7	Share	24
HBUS.ZIP	Hearts & Bones 200LX ver. for 100LX	HPHAND/100LX Gen, 11	Free	25
LEAPER.ZIP	CGA Frog game (100/200LX)	HPHAND/100LX Gen, 11	Share	na
LPCHKRS.ZIP	Let's Play Checkers (100/200LX)	IBMNEW/13	Share	21
MAZEUS.ZIP	Lair of Squid 200LX game for 100LX	HPHAND/100LX Gen, 11	Free	25
MONOPO.ZIP	Monopoly (100/200LX)	HPHAND/100LX Gen, 11	Free	22
PCHESS.EXE	Powerchess (100/200LX)	PCPRO/Spiele&Ani, 10	Share	21
PDTREK.ZIP	Star Trek graphics adventure (100/200LX)	HPHAND/100LX Gen, 11	Share	24
POKER.ZIP	Poker (95/100/200LX)	HPHAND/95LX Gen, 7	Free	na
POPGAMES.ZIP	4 games: Tetriz, Wall Breaker, (100/200LX)	HPHAND/100LX Gen, 11	Share	5
PTOMB1.ZIP	Pharaoh's Tomb arcade game (100/200LX)	HPHAND/100LX Gen, 11	Share	24
QUEST.ZIP	Adventure game (100/200LX)	HPHAND/100LX Gen, 11	Free	24
REVER4.ZIP	Reversi, outflanking game (100/200LX)	ZENITH/Fun&Games, 7	Share	22
ROGUE.ZIP	Adventure game (100/200LX)	HPHAND/100LX Gen, 11	Free	24
SEAHNT.ZIP	Battleship game (100/200LX)	HPHAND/100LX Gen, 11	Free	24
SOKOB-LX.EXE	Clone of Sokoban (95/100/200LX)	HPHAND/95LX Gen, 7	Free	25
TAHOE5.ZIP	Video poker (95/100/200LX)	HPHAND/95LX Gen, 7	Share	23
TETRIS.ZIP	Tetris sideways for (100/200LX)	HPHAND/100LX Gen, 11	Free	20,25
TREK1.ZIP	Star Trek text adventure (95/100/200LX)	HPHAND/100LX Gen, 11	Share	24

The following games would not fit on this disk, but are available on past issues of *The HP Palmtop Paper ON DISK* and the *Subscribers PowerDisk*. Bolded titles were mentioned in this issue. Some titles are alternate versions.

95-GAM.ZIP (Jan/Feb 92) **Go-Moku**, Mine Field, Sub Hunt HPHAND/7, Free, 22 (95/100/200LX); AG.ZIP (Jan/Feb 92) Chess & **Space Invaders** HPHAND/7, Share,20 (95/100/200LX); DIVDSK.ZIP (Fall, 1991) 15 Games, including: **Checkers**, **Concentration**, Fastermind, FastPoet, Fox 'N' Hounds, **Go-Moku**, Mini Adventure, Petals Around the Rose, Poker, Poker Solitaire, **Reversi**, **Tetris**, Unscramble, Ye Olde Toggle Block Game HPHAND/7, Share, 21, 25, 20, 22, 25 (95/100/200LX); EDCV23.ZIP (Nov/Dec 93) **Ed's Chess** IBMNEW/6, Share, 21 (100/200LX); GAMESLX.EXE (PowerDisk 94-95) **Checkers**, Poker Solitaire, MasterMind NA, Free, 21 (95/100/200LX); KLON.ZIP (Mar/Apr 92) Standard 7 pile **Klondike solitaire** HPHAND/7, Share, 23 (95/100/200-LX); MLYAHT.ZIP (Sep/Oct 94) **Yahtzee** dice game IBMNEW/6, Free, 25 (100/200LX); TT95.ZIP (Jul/Aug 93) **Tetris** type game for 95LX HPHAND/7, Free, 25 (95/100/200LX).

To Order the HP Palmtop Paper ON DISK, see order card page 49

a traditional draw poker game, which includes very realistic sound effects (which can be turned off during business events). The key stroke movements for functions such as calling, raising, etc., are intuitive and very natural on the HP keyboard. The game can also be invoked in monochrome mode, which works better than the CGA color version and is quite clear (if small) on the HP screens. File storage for the necessary files is about 155K.

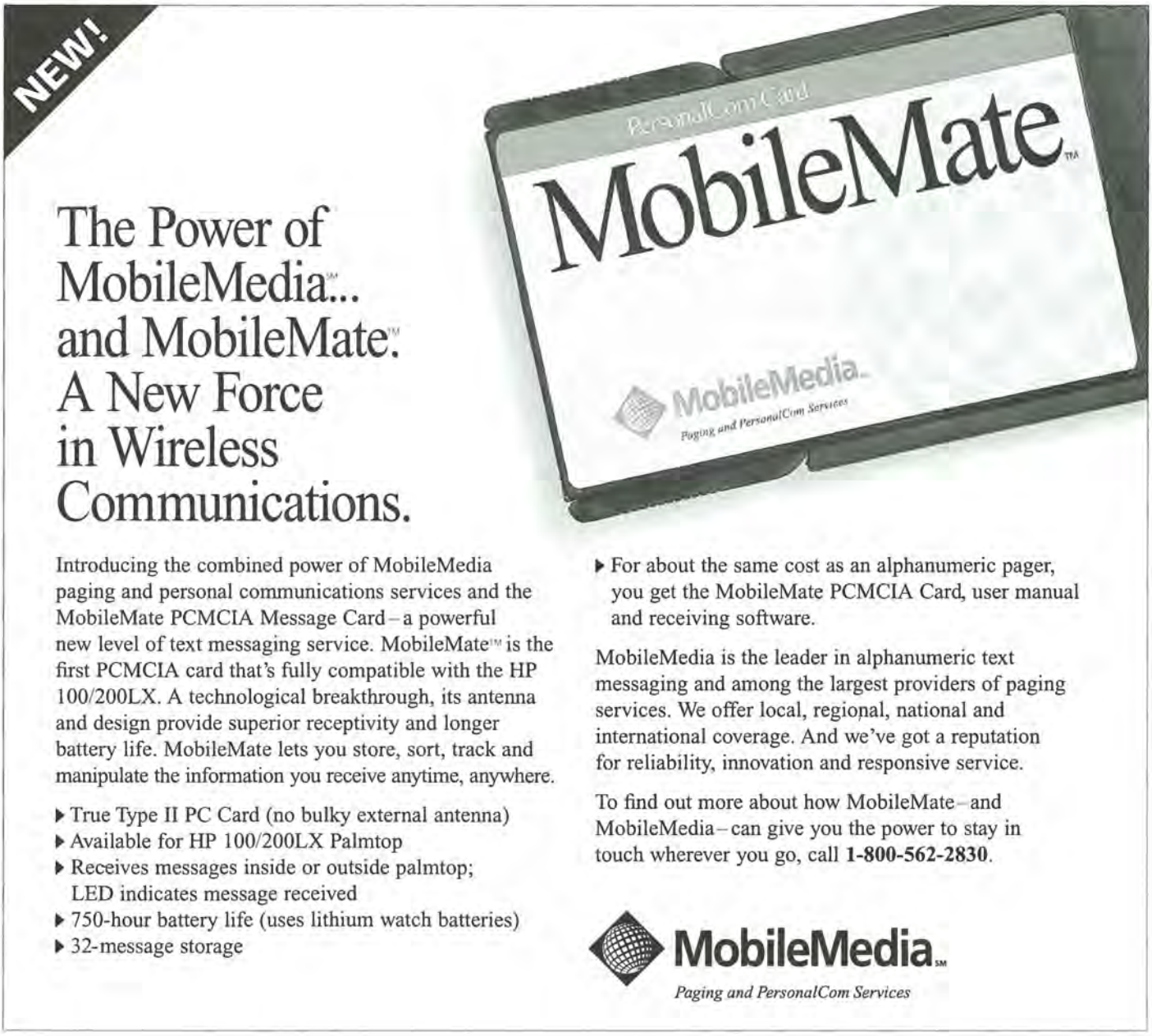
Also available is a similar game called **Amarillo Slim's 7 Card Stud** by John Comeau from Villa Crespo Software. This is a good rendition of stud poker. Although the cards are slightly smaller than in Vegas Johnny's Draw Poker, the overall screens and the movement commands are essentially identical. File storage runs a bit over 200K, but more than 50K are devoted to the sound effects files.

There are a number of "video poker" games, like **TAHOE5.ZIP**, that simulate the kinds of pseudo poker found on commercial slot machines. I've tried a number of these games on the HP Palmtops, but I don't find this form of poker to be very entertaining.

Solitaire

I've gotten more than a dozen different solitaire games to work on the HP 100/200LX. Two of my favorites are the commercial games of **Solitaire Royale** by Spectrum Holobyte and **Hoyle's Book of Games Vol.II: Solitaire** by Sierra-On-Line games.

The Solitaire Royale disk offers a dozen common flavors of solitaire including klondike, pyramid, and golf. It also has a suite of simple children's games such as **Concentration**. The colors are a bit tricky on the Palmtop screen, but the cards are visible even using the overhead lights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on commercial airliners. The keyboard movements for these games are fairly intuitive and quick, so you can play any of the games very quickly. File storage runs to about 90K.

The Hoyle's Book of Games II solitaire suite is much more ponderous, but has many different games and multiple levels of difficulty. This game uses about 600K of system RAM to operate, so you must leave System Manager (Press [&...] Applications Terminate all...) and start the program at the DOS prompt. When playing, the keyboard movements are straight forward, but quite a lot of keystrokes are needed. Since, the play is also very slow, I tend to use this game only when flying on long trips. The cards show up quite well on the HP 100/200LX screen, and the "colors," shown as shades of black and white, can be adjusted for the dim lights of airlines and hotel rooms. This is a very large game, and takes over 300K to store all of the files.

Other Card Games

There are too many kinds of card games available to deal with all of them. Some of the other games I've seen on forums and bulletin boards include canasta, fish, hearts, Japanese card games using flower decks, old maid, pinochle, spades, various Tarot implementations, and whist.

Gambling Games

Most forms of gambling have game versions available. Some of the games I've seen in computer stores and forum libraries include Baccarat, Keno, Craps, Roulette, Slot machines of various kinds, and even oriental gambling games such as Mah Jong.

Sports simulations

On the whole I have not been satisfied with sports simulations on the HP 100/200LX. Often the colors are difficult to distinguish, or the keyboard movements tend to need such frantic finger work that it is difficult to keep pace. Here are a few that seem to work:

Golf

Since I enjoy real golf, I've tried at least half a dozen commercial and shareware golf games, and have not found any that I really like. My preference is for graphics-based golf games that give a sense of truly playing the game. I've tried character-based golf games that simply use statistics or random factors to simulate the results from hole to hole, and find them boring.

From the shareware world, a golf game called **Caddiehack CGA Tour** from one of Micro Star's disks plays fairly well. The registered version is definitely better than the demo version, since it allows you to turn off the very leisurely introductory screen, includes more courses, and allows multiple players. The one-course, one-player version takes about 100K and the multi-course, multi-player game goes over 150K.

From the commercial world, a golf game called **California Pro** from Virgin Interactive Entertainment, has fairly good graphics and plays well, although this game locked up my Palmtop from time to time. Although this program is no longer available from the publisher, I found this program in the sale bin in the software section of a local department store for $5.00. File storage is about 150K for this game.

Football

There are a number of shareware football simulations that work on the HP 100/200LX computers, and I've tried perhaps half a dozen without finding any that held my interest for more than a few minutes. However, I'm only a casual football fan.

One that I have not tried, an old version of a commercial football simulation, **NFL Challenge** by Xor, reportedly works very well on the HP 100/200LX.

Other Sports Simulations

Many other sports have CGA games that can be played on the HP 100/200LX computers. I found an interesting martial arts simulator called **Budokan** from Electronic Arts that worked, although I had to carry the users guide around with me to get the passwords necessary to access some of its features.

I have seen, but not yet tried out other CGA games for baseball, billiards, miniature golf, tennis, soccer, and various summer and winter Olympic games.

Computer-based games

The games we've looked at so far are adaptations of games that exist outside of the computer environment (i.e. chess, solitaire). But the advent and growing popularity of computers has ushered in the development of new and unique software games created only for computers (i.e. Tetris and many of the electronic "arcade" games). In fact, this new software game business is now far larger than any of the older traditional game businesses and is one of the fastest growing industries in both the United States and in Japan.

The software game business is also very interesting to those in the computer industry itself. The major game companies are industry leaders in the development of software tools and methodologies.

Here are some examples from a few of the many categories of these specialized games that work on the HP 100/200LX computers.

Adventure Games

The use of computers for interactive adventure gaming has spawned a significant sub-industry in its own right. As of 1995, a total of more than 100 adventure games are on the commercial market or can be downloaded from various libraries and bulletin boards. In addition there are probably 20 text-based adventure games and perhaps a dozen graphics-based computer games that work fairly well on the Palmtops, including **Quest**, **ADV100.ZIP**, **COLOSS.ZIP**, **ADV95.ZIP**, **DUNGEO.ZIP**, **TREK1.ZIP**, **PDTREK.ZIP**, **Pharoah's Tomb** (see graphic next page), and others.

Pharoah's Tomb screen

One of the classic adventure games of all time, **Rogue** 💾, is now available for the 100/200LX. About 10 years ago the game of Rogue, by Michael Toy and Kenneth Arnold, had the same kind of popularity that "Doom" is achieving today. Rogue and Doom have similar concepts; players move through gloomy dungeons and kill various monsters. As you proceed and pick up various objects and gain experience your strength goes up – and the monsters get tougher. Rogue is a character-based program that takes only about 99K of storage.

Military Games

The use of computers to simulate military campaigns at both the strategic and tactical level is also a significant sub-industry. Both commercial games and shareware games are now available that deal with every kind of warfare known to the human species: infantry combat, armor combat, air combat, naval engagements, submarine warfare, and missile combat. Every historical era from the ancient world through space warfare have multiple games available. One such military game that works on HP 100/200LX is **SEAHUNT.ZIP** 💾, a variation of battleship.

Seahunt screen (variation of Battleship)

Flight and Driving Simulators

There are many different kinds of vehicle simulations that work on the HP Palmtops, including the older versions of the classic **Microsoft Flight Simulator**. Within this same class of games can be found automobile racing games, various space flight simulators, and a few simulators of other kinds of vehicles such as sail boats. There are even several air traffic control games reported to work on the 100/200LX.

Specialized Puzzle and Movement Games

The Russian game "Tetris" spawned a whole new class of computerized games that is still growing rather rapidly. Several Tetris clones and Tetris itself are available in versions that run on HP 100/200LX computers, **TT95.ZIP** 💾. A new version of Tetris was recently released for the HP 100/200LX – you hold the Palmtop sidewise to play (TETRIS.ZIP💾).

A game in the same family, but with a different playing style, is the popular **Sokoban** 💾 game. In this maze game, the pieces are motionless and the player tries to push them out of the way without getting them stuck against walls or each other.

Because time is not a factor, this game does not require frantic keyboard movements and has a more leisurely style. It is fairly compact, and takes about 20K of storage.

The HP 200LX comes with a built-in Lair of Squid game (also available for the 100LX as MAZEUS.ZIP 💾). In Squid, you move around inside a 3-D graphics maze, avoiding the squid. It takes up about 30K. A newer version of Hearts & Bones is built into the 200LX and is also available for the HP 100LX (HBUS.ZIP💾). International versions of Squid and Hearts & Bones are available on CompuServe for French, German and Spanish-language 100LX's.

Children's Games

Here too a host of available games can be played on the HP Palmtops. Some of these games fit into the computer-based category, such as the adventure game Commander Keen. Others are computer versions of old favorite games like Boggle, Concentration 💾, Yahtzee 💾), Old Maid. There are also eductional games, such as ones designed to help with math skills, reading skills, and the like.

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Summary and conclusions

To those of us who travel a great deal by airplane, a good game can be very relaxing after a tough business trip. The HP 100/200LX computers were not designed as game machines, but in fact do creditable jobs for many different kinds of games. They are particularly good for playing card games and playing classic board games such as chess and checkers that don't require fast keyboard responses. The HP Palmtops are less effective on games that require very fast keyboard actions such as sport simulations. However, an 11 ounce computer that can play standard CGA graphics games is a considerable accomplishment.

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JetEye PC Provides HP Palmtop Users with Infrared Link to Desktop PCs

JetEye PC lets you set your HP Palmtop or OmniBook down next to your PC and transfer files back and forth without the hassel of connecting cables or the expense of memory cards and card readers.

By Al Harrington

The great advantages of the HP Palmtop is its portability and ease of use. It slips in your pocket at a moments notice and goes where you go. When you need to look up a phone number, or write a memo, you pull it out and press a couple of keys. Although the Palmop provides an almost self-sufficient solution to personal information management, many users still rely on their desktop PC for many tasks and occasionally have to transfer files back and forth between their Palmtop and their desktop systems.

In the past, this procedure has been a little complicated and expensive. Users had a few options. They could purchase a connectivity cable, install file transfer software on their PC and physically connect the two computers to transfer files. They could install a PCMCIA card reader in their desktop PC and use a PCMCIA memory card in their Palmtop's card drive to swap files back and forth. A third, more complicated approach would be to outfit both computers with modems and transfer files between the two computers via a phone connection.

JetEye PC provides infrared file transfer

A few years back Extended Systems came out with the JetEye Infrared Printer interface. This device connected to the parallel port of a LaserJet printer and let 95LX users and eventually 100/200LX users set their Palmtops down next to the printer and have memos and other documents printed via the infrared port. It eliminated the hassel of transfering files to a desktop PC, or connecting the Palmtop to the printer via a collection of cable and serial-to-parallel adapters.

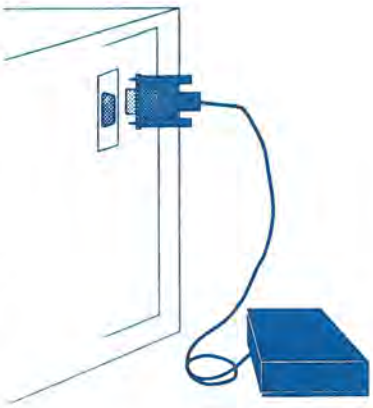
Extended Systems has done it again with the **JetEye PC**, an infrared interface for your PC. Originally designed for the HP OmniBook, it allowed the OmniBook to transfer files to and from your desktop PC without needing to use any cables. Extended Systems recently announced that the JetEye PC will also work with the HP 200LX.

The JetEye PC allows on-the-go connectivity for the Palmtop. With LapLink loaded and running on your desktop PC you need only put the Palmtop near the JetEye PC and start LapLink Remote. No cables, no hassles.

Installing JetEye PC

I was surprised when I opened the JetEye PC box and looked inside – there wasn't much there. The JetEye PC IR receiver looks like a PC mouse that has been cut in half (see drawing below). It has a cable coming out of it with a 9-pin connector on the end.

Installing the JetEye PC couldn't be easier - you simply plug it into the serial port on your desktop PC (a 9-to-25 adapter is included).



JetEye PC connects to serial port on the back of your desktop PC

ABOUT THE AUTHOR

Al Harrington works as a Test Engineer for Hewlett Packard's Roseville Networks Division. Al works with JetDirect products, which provide newtork printing solutions. He has been using HP Palmtops since the 95LX first came out. Al sings in an A Cappella Group called "Wild Pitch." Al's CompuServe ID is [73323,1600].

There is no specialized software needed for the JetEye PC. It simply redirects data through the serial port. You will need the HP 100/200LX Connectivity Pack software loaded on your desktop PC to communicate with the Palmtop. Refer to the "Connectivity Pack User's Guide for the HP 200LX and the HP 100LX" for information on installing the Connectivity Pack software.

Using The JetEye PC with the HP 200LX

The JetEye PC is very easy and convenient to use. Think of it as connecting the Palmtop and desktop PC with an invisible cable and then running the appropriate communications software. You can communicate and transfer files using the Connnectivity Pack's version of Filer or LapLink running on the desktop PC. Make sure JetEye PC and the HP Connectivity Pack software are installed as described above. Then follow these steps:

USING FILER

1. Set the Palmtop's IR port next to the JetEye PC.

2. Start FILER on your desktop PC. How you do this will depend on how you have the Connectivity Pack software installed on your desktop. You can run the CPACK software out of DOS by typing **app200** at the DOS prompt and pressing [ENTER]. Then highlight the FILER icon and press [ENTER].

If you have CPACK installed on a system running Windows, click twice on the CPACK200 icon, then run FILER.

3. Press [ALT]-[C] to bring up the Communications menu. Press **R**emote Settings.

4. Set the Baud rate to 115200.

5. Set the Interface to the COM port that JetEye PC is connected to.

6. On the 200LX, open FILER, press [ALT]-[C] to bring up the Communications menu. Press **R**emote Settings.

7. Set the Baud rate to 115200.

8. Set the Interface to Infrared.

You then should be able to transfer files between the Palmtop and the desktop PC. Refer to the FILER section in the Connectivity Pack users guide for information on how to transfer files using Filer.

USING LAPLINK

LapLink Remote Access creates a special kind of link called a "redirector." With a redirector link, your Palmtop's drives appear as additional drives on your PC, providing you with direct access to all of the Palmtop's files.

LapLink should be configured as described in the LapLink Remote section in the Connectivity Pack user's guide (see *LapLink Remote, settings* in the index). You'll want to make sure that the Palmtop and the desktop PC are set to the same file transfer rate (115200). The Palmtop should be set to the IR port. The desktop PC should be set to the COM port that the JetEye PC is connected to.

Conclusions

While the Filer method worked just fine, I prefer to use LapLink. I found it to work quite well with the JetEye PC. However, remember that it is much easier to interrupt an IR connection than a cabled connection. If you hit the Palmtop and cause it to point away from the JetEye PC, the connection can be broken. This can cause a problem if a file transfer is in progress. If this happens you will get a "Permission Denied" DOS error and the connection will close. If you move the Palmtop back into IR range the connection will resume in anywhere from 20 seconds to one minute. While the reconnect times varied in my tests, it always reconnected.

It is nice to be able to walk up to my desktop PC, set my Palmtop next to the JetEye PC and start LapLink Remote on my 200LX. No cables, no hassles.

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Works on the 100LX

JetEye PC is targeted for the OmniBook and 200LX, and is officially not supported for the 100LX by the manufacturer. However, it will work with the 100LX. You can use the Filer transfer option as is – IR is already supported on the 100LX. If you want to use LapLink on the 100LX, you'll have to transfer it over from the HP 100/200LX Connectivity Pack software. (See *LapLink Remote, installing on the HP 100LX*, in the index of the Connectivity Pack users guide.) Then follow the "USING LAPLINK" instructions above.

I tested both the Filer and LapLink connection on the HP 100LX. JetEye PC worked as well as it did with my HP 200LX.

The JetEye PC is a great product for Palmtop-to-Desktop connectivity. Cables are a hassle – the JetEye PC lets you get away from them.

Product Index: page 55

Communication Solutions

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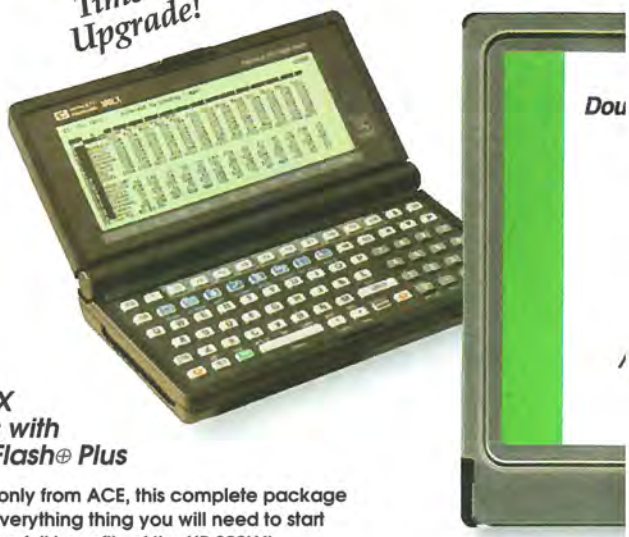

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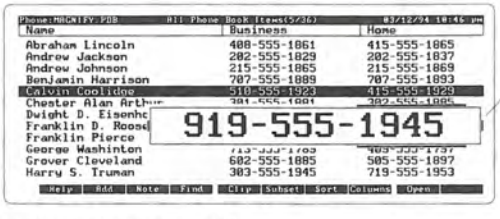

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HOW TO USE

User Profile:

Engineer on the Road with the HP Palmtop

His home and office is in Alabama and he's temporarily assigned to White Sands Missile Range in New Mexico. Here's how he bridges the distance with the HP Palmtop.

By Chris Lott

I'm an electrical engineer working on a research program for the defense industry. My home and office is Huntsville, Alabama, USA, but I was recently assigned to the White Sands Missile Range in New Mexico for two months. Having just upgraded from an HP 95LX to an HP 200LX, I thought this would be an excellent opportunity to put the 200LX through its paces.

I also promised myself that I would shift my PIM activities entirely to the HP Palmtop - abandoning the clumsy hybrid system I had used in the past with my 95LX, a DayTimer, and endless slips of paper. The system I purchased was a 1MB HP 200LX, an ACE Double Flash Plus 60M, a MegaHertz 14.4 FAX/ Modem, the HP connectivity pack, a spare serial cable, and the HP AC adapter. I use a leather case I got from EduCALC (# 2520) to protect my investment when kicking around.

Switching from the HP 95LX to the 200LX

I bought my 200LX locally in Huntsville. The other accessories were mail ordered and hadn't yet arrived, but I was able to transfer files between the 200LX and my 95LX using FILER and the IR ports. I received my spare serial cable before I received the new HP 100/200LX Connectivity Pack. Fortunately, I found that I could use the software from the HP 95LX Connectivity Kit to transfer files between the desktop PC and HP 200LX.

Translate Phone Database from the 95LX

One of the first tasks I had was transferring my 95LX Phone Book into the 200LX format. I copied the 95LX .PBK file over to the 200LX, opened the 200LX Phone Book application, pressed [MENU] file Open and selected the .PBK file. I pressed [ENTER], gave the file a new name, and pressed [F10]. The 200LX automatically translated the 95LX file into the 100/200-LX format.

The import feature places information from the old Name field in the new Name field, data from the old Number field in the new Business (number) field, and information from the old Address field in the new Note field. The names in the Name field were fine, but the phone numbers in the Business field were mostly home phone numbers and everything from the Address field was dumped in the Notes field. I'd have to transfer this information to the appropriate fields on the 200LX.

I prepared several system macros to assist with this process. System macros can be recorded as you enter the keystrokes, or created using the System Macro application. For more on this, see "System Macros" in your *HP 100/200LX User's Guide.*

My first macro moved the phone number from the business field to the home number field. It looks like this:

```
{Alt+B}{Cut}{Alt+O}{Paste}
```

I ran this macro when I was in the desired Phone Item screen. {Alt+B} highlights the data in the Business phone field. {Cut} cuts it to the clipboard. {Alt+O} moves the cursor to the Home phone field. {Paste} pastes the cut number in that field.

I was consistent in entering addresses in my 95LX Phone Book Address field. The first line for the street address and the second for the city and state. When the .PBK file was translated by the 200LX, this information appeared in the Note field as shown below:

```
1234 Main Street Apt #56
Nowhere NM 23456
```

ABOUT THE AUTHOR

Chris lives in Huntsville, Alabama with his wife Debbie and three children. He received a BEE from the Georgia Institute of Technology in 1985. He works as a lead engineer for Phase IV Systems Inc., doing hardware design of RF, analog, and microcontroller systems. He welcomes comments and questions by Internet e-mail to lott@phase4.com.

My second macro moved the first line of the notes field to the 1st address field. The macro looks like this:

```
{Alt+N}{Shift+Down}{Cut}{Alt-]}{Paste}
```

The third macro moves the contents of the second line of the notes field into the city, state and zip code fields, respectively. It looks like this:

```
{Alt+N}{Ctrl+Right}{Cut}{Alt+C}{Paste}
{End}{BackSp}{Alt+N}{Ctrl+Right}{Cut}
{Alt+T}{Paste}{End}{BackSp}{Alt+N}
{Shift+End}{Cut}{Alt+Z}{Paste}
```

The above macro assumes the city is a single word – I had to manually fix the fields of city names with two words such as New York, Los Angeles, etc.

[Note: the System Macro application seems to have a little trouble with Alt-1 key combination. I used the Palmtops system macro record feature to record the above macros as I keyed in the commands. The macros I created in this manner worked fine. However, when I opened the System Macro application and looked at these macros, the {Alt+1} code and any key strokes entered after it did not display. They were there somewhere because the macros worked. I just couldn't see them. In addition, I couldn't manually type in a macro with the {Alt+1} notation from the System Macro application, nor could I edit a recorded macro with this sequence. (Editor's note: This is a bug in the macro editing program.)]

I spent most of an airplane flight from Huntsville to El Paso using these system macros to move home phone numbers and address information to the correct fields of the HP 100/200LX Phone Book application. The macros made it easier than I had envisioned. However, the way PhoneBook handles address information is a pet peeve of mine.

For example, my HP 95LX phone book contains the names and addresses of all employees in my company – about 60 entries in all. Each phone book entry has fields for the company's name and address. If I used these fields as designed, I would end up with a file that contains 60 repetitions of the same data. I would prefer some means of having this information entered once. This would reduce storage and greatly ease record updating were my company to move or change phone numbers (and we've done both in the past).

NoteTaker for important numbers

After completing the 95LX phone book translation, I opened NoteTaker and focused on entering some important numbers I had been keeping in my DayTimer. These included bank account numbers, social security numbers, frequent flier numbers, etc. For example, I gave one entry the

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title "BankAccounts" and entered all my bank account numbers in the Notes field. I entered the rest of these numbers by the groups listed above. I now have instant access to them by pressing [CTRL]-[MEMO].

I also created several NoteTaker entries for keeping track of miscellaneous on- the-job stuff. One contains the phone numbers of people I am working with while at White Sands. Another contains a list of things I need to have shipped from our Huntsville office, and another contains a list of parts I need to order.

Connecting to the Office Network

Our office computers are connected with Netware, and we use a single dedicated computer running CloseUp and connected to a modem to provide remote access. Once connected, the remote caller can check his or her e-mail and otherwise work with files and programs on the file servers or the dedicated CloseUp computer.

When I first got my 200LX, I never dreamed that I could use it as a remote user to our office network. However, doing so turned out to be quite simple. I placed the CloseUp program on the C: drive (since I must remove the A: drive in order to use the modem), and ran it like normal. I used CloseUp version 6, the current version. I only needed two files on the Palmtop: CREMOTE.EXE (272 Kbytes) and CLOSE_UP.MNU (658 bytes). I told it the computer had a black-and-white monitor, use the com2 port at 19200 baud, and I was connected.

Several engineers and managers back in Huntsville needed to keep abreast of the progress of our work at White Sands. To this end, my Palmtop came in handy. The drive from our work place to the hotel was about one hour. This trip home in the afternoon was the perfect time to prepare a daily report (I was riding as a passenger). When I arrived at the hotel, I would connect to the office, upload the report, and send it to the appropriate engineers by e-mail. This way, they had detailed up-to-date progress reports waiting for them on their computers each morning.

Logging onto Internet

I have an account with an Internet provider in Huntsville, and I keep up with several USENET newsgroups. The 200LX worked very well in this application. I used the built-in Datacomm application with my FAX/Modem card. This setup allowed me to call in from anywhere with a phone line and have instant access to the entire Internet. Not only did I keep up with newsgroups, but I used many of the other services on the Internet.

For example, I have a medical condition that requires occasional visits to a specialist back in Alabama. One such visit happened during my assignment out here. I used the internet to communicate with my doctor, and to arrange the details of the appointment. Unfortunately, other communications with my doctor, such as a prescription and information regarding an experimental medical trial program he wants me to consider, had to be handled by conventional means ("snail mail" and FAX machines). I can see the day soon, however, where even this kind of information can flow rapidly and electronically over the internet. My doctor reports that radiologists are already using the internet to exchange high-resolution medical images. Amazing.

Transferring a Report to a Macintosh

I had an occasion to provide an engineer at White Sands with a report he needed. The report in question was prepared in ASCII format by an associate and was stored on our file server in Huntsville. To complicate matters, my company is PC-based, while the engineers at White Sands I was working with used Apple Macintoshes exclusively.

First I used the CloseUp program to connect to the office and transferred the report to my Palmtop. Using a short phone line (cable with RJ-11 connectors, which I always carried in my briefcase), I connected my Palmtop modem directly to the Mac's modem. We started up a terminal emulator program on both machines (Datacomm on the 200LX). I issued the ATO command to each modem which made them connect. Once connected, I simply transferred the file using the ZMODEM protocol. While I was glad to be able to get the report delivered as required, I look forward to the day when computers are more universally connected and such gyrations aren't necessary.

Downloading FORTRAN Files to a Luggable Computer

During the trip, I needed to make an unexpected side trip to a supplier to assist in performing acceptance tests on some equipment. These tests required the use of a "luggable" PC-based computer running some special purpose FORTRAN data processing programs. While I had brought the computer along with me, I didn't have the FORTRAN files needed. The solution again involved my Palmtop. I connected to the office computer, and downloaded the various source, batch and data files I needed to my 200LX. After that, I connected my Palmtop by serial port to the luggable. I was then able to transfer the files using terminal emulation programs and the ZMODEM protocol. This transfer worked, and the files compiled and worked as expected. My side trip was successful and went without any further problems.

Quicken for Expenses

I have never used Quicken before my Palmtop purchase, but it was surprisingly easy to learn. I used it to keep track of my travel expenses. When the time came to fill out my travel expense report, all the information I needed was right there in the Pocket Quicken database. I was so impressed with this program, that I bought a copy of Quicken for my

home computer. I look forward to balancing my checkbook electronically each month.

Ham Radio Packet Operations

I am an amateur (ham) radio operator, and I carry my VHF packet station with me on long trips such as this. In this application, I use the 200LX as a terminal which connects to the TNC (terminal node controller). With this setup, I can communicate over radio to a variety of bulletin boards, and send messages to my ham buddies back in Huntsville.

Configuration Management

I have responsibility for keeping track of the numerous drawings for the equipment we were installing at White Sands. Back in Huntsville, we maintain a Lotus 123 database of the drawing numbers. This database contains the drawing number, the title, the responsible engineer, the date released, etc. Before my trip, I made a copy of this database on my Palmtop. Now, whenever I need to refer to this database, such as when assigning a drawing number to a new part, I have the entire database right at my fingertips. I simply call up the spreadsheet on my 200LX and make the necessary changes. This capability came in very useful on several occasions during my trip.

Schematic Capture

One of the programs I transferred to my Palmtop before leaving Huntsville was an old copy of OrCAD, a schematic capture program. I recalled from an article in the Palmtop Paper that a 100LX user had successfully gotten Orcad to run, so I thought I'd give it a try on the 200LX. I installed OrCAD on my desktop computer, configured it for CGA drivers, then copied the whole program over to my Palmtop. (I had a doubled 30MB Flash card in my memory slot and wasn't concerned about space. However, the program can easily be pruned down.) Sure enough, things worked smoothly (I configured the program for a CGA display). I was surprised at how crisp the CGA mode appeared on the 200, compared to a regular monitor. I was able to put OrCAD to use during my trip by drawing up several small test circuits I needed. (I used OrCAD 3.11, which is no longer supported by the manufacturer. The current version, SDT-386+, requires a 386 processor and will not work on the HP Palmtop.)

Hinge Problem

Towards the end of my trip, I began to notice a distinct "clicking" sound from the left end of the Palmtop's hinge. Coincidentally, I noticed some postings on the comp.sys.palmtops newsgroup about this very same problem. One poster said HP Technical Support recommended an in-warranty replacement. Once settled back in Huntsville, I called HP and got very courteous service. They sent the replacement 200 overnight mail, and I transferred my files over to it without any problems. The new unit doesn't exhibit the clicking sound, but has a much stiffer hinge.

Conclusion

Overall, I have been very impressed with the HP Palmtop products. Except for the hinge problem, the unit has held up very well under all types of adverse conditions. Having been a long user of HP calculators, I have come to expect this ruggedness from their products. I have successfully shifted my PIM activities, and have nearly eliminated my use of paper slips. Having a small computer with all these capabilities in my pocket or briefcase has proven to be a real benefit to me, and I recommend it highly.

Product Index: pg 55
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How to Manage Your Time & Get Control of Your Life

Use the HP Palmtop and these techniques to manage your future, rather than being managed by it.

By Tad James, M.S., Ph.D.
Copyright 1994

We've all wished we had more time and were better organized. That's one of the reasons we use the HP Palmtop. APPT reminds us where we're supposed to be. PHONE organizes contact information, and MEMO or NOTETAKER can store a raft of information about personal and business interests. As is, the Palmtop is a good Personal Information Manager. However, the HP 100/200LX has the potential to become a great, advanced time management tool, more sophisticated than the most advanced planning system on the market today. First, let's look at the basics of time management. Then let's see how you can use your 100/200LX to get control of your time and your life.

The Basics of Time Management:

There are four steps that are vitally important to successful Time Management. They are as follows:

1. Know and write down your long-term goals

Develop a written list of the most important things that you want to do in the next 3 years. If you are a business owner, writing goals for the next 10 years wouldn't hurt.

Suppose for a moment that you were in a boat about to set sail. The captain orders the crew to "weigh anchor," and then leans over to you and says, "By the way, I forgot to mention that we don't have a rudder." What would you do? Jump ship then and there if you were smart. Without a rudder or charts to guide your course, you don't have the slightest idea where you'll end up.

You also need to set a course in your life. Where do you want to be in the next three months? Six months? One year? Three years? Six years? Ten Years? How do you expect to get there unless you know where "there" is?

2. Have an effective daily calendar and appointment system

You need to be able to keep track of your daily events and appointments. The system should be able to respond to your needs and keep you on time.

Those of us with HP Palmtops already have Appointment Book to keep track of where we want to go and what we want to do. However, we may still keep another calendar on the wall at home, or another electronic appointment book on our desktop at work. Appointments can get spread around in different places. The point here is use one calendar for all your appointments.

3. Have a list of the items you need "To-Do" on a daily basis

Again, Palmtop users have an excellent ToDo feature built into the Appointment Book, but may keep additional todo lists written down on a legal pad, or on little yellow slips posted to the computer.

It is very important that all your todos are in one list. It is equally important that the To-Do list be in the same place as the daily calendar. This lets you look at what you need to do and easily schedule it, or compare it to what you already have scheduled. Having the To-Dos and appointments together creates a synergistic system that makes you more effective.

You should also be able to prioritize your To-Do list. That is, you should be able to designate the relative importance of each todo. You may designate a todo as an A, B, C, 1, 2, 3, or a combination of the two, like A1, A2, A3, B1, B2, etc.

4. Integrate the above three

The final thing we need to do is to integrate these parts of our time management system. As we plan our day's or weeks appointments and todo's, we check our immediate priorities and long-term goals. This helps us get beyond focusing only on immediate priorities and lets us focus part of our attention on where we are

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Tad James, M.S., Ph.D., is a Seminar Leader, Author, and Personal Growth Consultant. He is the Author of The Secret of Creating Your Future, and Time Line Therapy and the Basis of Personality. He holds a Masters Degree in Communication from Syracuse University, and a Ph.D. in Ericksonian Hypnosis from the American Institute of Hypnotherapy. Tad is a Certified Master Trainer of Neuro Linguistic Programming, and the creator of the Time Line Therapy® techniques. He and his wife Ardie live in Honolulu. You can contact him at 808-941-2021 or on CompuServe at [73160,352].

going, 3 months to 5 years down the road. This is especially important when we are 3 years out on a 5 year plan and have lost the "vision" of the big picture.

Creating your future: What are your long term goals?

First things first – write down your long term goals. What do you want to be doing in three years? Can you imagine in your mind what it is that you'll be doing three years from now? If you've never looked at what you want to do in your future, perhaps you would like to try an exercise I call "creating your future."

Let's create our goals for three years from now. Imagine if you would, that the future is a road that stretches out before you. In your mind's eye, imagine walking out on that road to three years from now. As you walk down the road to your future, let your mind create for you the changes that you want in the future. When you get to the place that is three years from now, use the sample goals sheet above to write down your goals, or open up Memo and write down what you discover – what you want to happen.

Title your notes, **Goals for 3 years – Date 01/15/98, Age 47.** 01/15/98 is the date by which you'll have accomplished the goals, and 47 is your age at that time. This information will help focus your attention on the goals. Then list your three-year goals.

Do this process for 3 years at the very least and 1 year, 6 months, and 3 months if you can. If you're adventuresome, then also do 6 years and 10 years. Go over the notes you've taken and edit them down, or rewrite them until you are satisfied with the goals.

Goals for ____Years–Date__/__/__ Age____

Sample long term goals sheet

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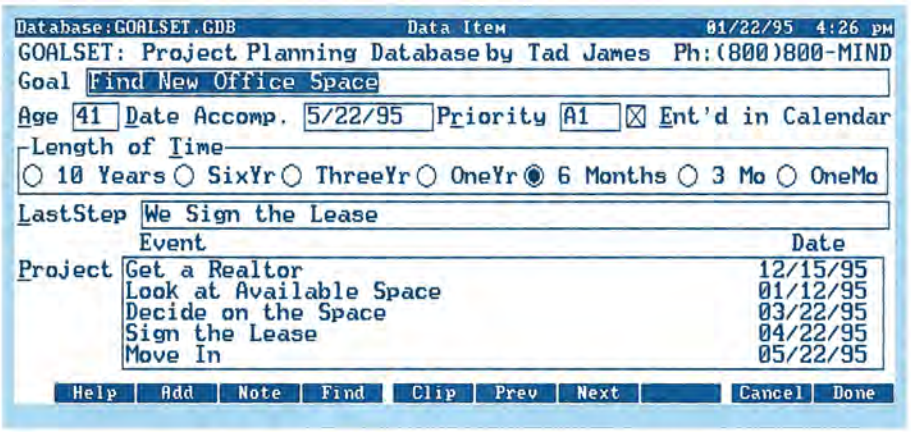
Implementing our time management system on the HP 100/200LX

After you've clarified your goals above, enter them on your HP Palmtop. You can save them in a Memo text file. However, the instructions below assume you are entering your goals into GOALSET.GDB, a special 100/200LX database file I've created for this purpose. A copy of GOALSET.GDB is available on this issue's *The HP Palmtop Paper ON DISK* or in the **100LX General** section of CompuServe's **HPHand** forum. I've displayed the GOALSET Data Item screen on the next page for those who do not have access to GOALSET.GDB and wish to create it on their own. (See "database definition" in the index of your *HP 100/200LX User's Guide* for information on creating or modifying a database.)


Database:GOALSET.GDB
Data Item
01/22/95 4:26 pm
GOALSET: Project Planning Database by Tad James Ph:(800)800-MIND
Goal Find New Office Space
Age 41 Date Accomp. 5/22/95 Priority A1 Ent'd in Calendar
Length of Time
10 Years SixYr ThreeYr OneYr 6 Months 3 Mo OneMo
LastStep We Sign the Lease
Event
Date
Project
Get a Realtor 12/15/95
Look at Available Space 01/12/95
Decide on the Space 03/22/95
Sign the Lease 04/22/95
Move In 05/22/95
Help Add Note Find Clip Prev Next Cancel Done

Goals database, individual item screen, HP 100/200LX

1. Enter Goals into the Goals Database.
The following instructions assume you are using GOALSET.GDB on an HP 100/200LX. Copy GOALSET.GDB to your HP Palmtop and press CTRL-PHONE to open the Database application. Then press MENU File Open, select **GOALSET.GDB** and press ENTER.

Now add the goals you have just developed. (There are 2 examples of goals already entered, so you can see how it works.)

A. Press F2 (Add) and enter the goal that you have written into the **Goal** field.

B. Tab to the **Age** field and enter your present age. This is to assist you in being able to appropriately contextualize the goal by reminding you of the age you will be at the time the goal is occurring.

C. Tab to the **Date Accomplished** field and key in the date by which you want to accomplish the goal.

D. Tab to **Priority** and enter the priority of the goal. (If you're not sure, come back to this one.)

E. When you transfer each goal to your Appointment Book calendar, check the **Entered in Calendar** box.

F. Tab to **Length of Time** and select one of the choices. The Length of Time is the amount of time from now until you will accomplish the goal. This section will allow you to keep track of groups of goals that you write as you do this exercise.

Repeat steps A-F, and enter all your goals into the database. We'll fill in the LastStep and Project fields later.

2. Transfer all appointments and todos to the HP Palmtop.
For this system to work as described, everything has to be on the Palmtop. Make sure that all your appointments are in Appointment Book, and not on PostIts somewhere. You'll need to do the same thing with with your todo lists.

One nice thing about the HP 100/200LX is that it lets you prioritize ToDos. From APPT, press F10 (ToDo) F2 (Add) and enter a description of the ToDo, Start Date and Due Date.

ToDo item entry screen, 100/200LX

Tab to the Priority field and enter any two alphanumeric characters (A, 1, A1, B2, etc.). The items in the ToDo List display are ordered by priorities, numbered priorities first, 0-9, letters next, A-Z (e.g. highest to lowest: 0, 3, 7, A, A1, A7, AA, B, etc.).

For more information on using these features see "appointments, adding" and "to-dos, adding" in the

Time management on the HP 95LX

The system described in this article was developed for the HP 100/200LX. However, it's pretty easy to get it to work on the HP 95LX.

You cannot use GOALSET.GDB on the 95LX, but you can create a simplified version of it using the Phone Book database. Open a new Phone Book and enter the following information in the following fields:

Phone field ..... Information

Name: ..... Goal
Number: ..... Date, priority, length of time, Age
Address:
Line one ..... LastStep
Subsequent lines ... steps/dates accomplished

If you are consistent with the way you enter your goals, dates, etc., you can create macros that will cut and paste that information to your Appointment Book.

The HP 95LX provides 10 priorities for your Todos. On the HP 95LX, from APPT, press F10 (Todo) F8 (Insert) to enter a Todo. The second field in the Todo entry screen is the Priority field. With the Priority field highlighted, press <Spacebar> to select 1st through 9th priority levels. Your Todos will be ordered by priority level (1st highest, 9th lowest) in the Todo display list. For further information, see "Macros," Appointments,adding" and "todos, adding" in the index

index of your *HP 100/200LX User's Guide*.

3. Determine steps of action to accomplish goals.

In reality, this has to be done whether you are using the Palmtop, or writing things down on paper. Accomplishing any goal involves the creation of a plan, a list of things you have to do, people you have to meet, milestones you have to reach. Before you can move goals to your Appointment Book you have to flesh out each goal and write down the steps involved in accomplishing it.

We'll enter the steps of action in the **LastStep** and **Project** fields of GOALSET.GDB.

A. Press [CTRL]-[PHONE] (both at the same time). If the GOALSET database is not already selected, press [MENU] **F**ile **O**ther, move the selection bar to **GOALSET.GDB** and press [ENTER].

B. Highlight one of the goals that you just entered into the Database and press [ENTER]. Press [ALT]-[L] or tab over to the **LastStep** field and enter the last thing that has to happen so you know you have achieved your goal?

For example, let's say we enter **Find New Office Space** as our goal. The last step in that process might be signing the lease. So we enter **We Sign the Lease** in the LastStep field.

C. Tab to the **Project** field and enter all the things you need to do to find a new office space.

First write down all the steps involved, even if you are not sure of the order. Then put the steps in the correct order (cut and paste if necessary) and assign dates by which each step must be accomplished. In the New Office Space example, we might have the following steps:

Event	Date
Find a Realtor	12/15/95
Look at Available Spaces	01/12/95
Decide on the Space	03/22/95
Sign the Lease	04/22/95
Move In	05/22/95

The "Move in" date above is the critical one. All other steps need to happen before 5/22/95. If you finish an intermediate step later than you planned, you may have to adjust the dates by which subsequent steps must be accomplished.

D. Finally, make the individual steps into concrete action items by cutting and pasting them into the Appointment Book application as appointments or todo items.

Repeat the above steps for each of the important goals you have written. Be sure to fill in the LastStep field and enter intermediate steps and accomplishment dates in the Project example.

Review your results regularly

You might want to review your goals and projects quarterly, to see how "on time" and "on budget" you are. If you are consistently underestimating or overestimating the amount of time needed, you may want to make a note of that and adjust your thinking accordingly. The same thing goes for budget estimates.

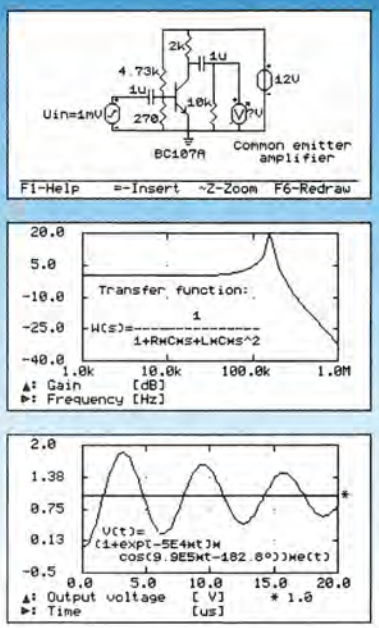
My rule of thumb is that if you're within 10% of your predictions, then you can celebrate! (That means that if you thought it would take you 20 days to complete a project and it takes you 22, you're doing fine. Or if your goal was to achieve $100,000 in sales and you hit $90,000, pat yourself on the back.

The system I described above works whether it is automated on a Palmtop, or entered by hand in a day planner. But the Palmtop makes it quick and easy. The above is one small, but important step in gaining control over where you are going, and what you want to have when you get there.

Share/Freeware Index: pg 56

Palmtop Circuit — *HP 95/100/200LX*

Nonlinear analog circuit analysis



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Through the Looking Glass:

Start an application and load its data file in one step

Ed shows how to use FILER.INI to activate a built-in, undocumented autoload feature of the HP 200LX that lets you highlight a file in Filer and press ENTER to start the corresponding application, with the file loaded.

By Ed Keefe

Apple Macintosh users sometimes boast about the fact that they can click on a document file folder and open it automatically in the appropriate application. A comparable feature, "Associate," is found in the Windows File Manager. Users of the HP 200LX might be interested and surprised to know that a similar feature is built in to HP's new Palmtop PC.

This undocumented autoload feature of the HP 200LX lets you highlight an MS-DOS application's data file in FILER and then press ENTER to launch the DOS application with the data file loaded. The key to accessing this feature on the 200LX is the creation of the FILER.INI file.

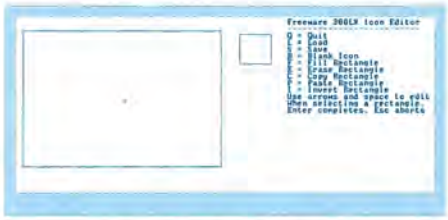
This feature may sound familiar to users of the programs 95Buddy, 100Buddy, and now Buddy 2.0 for the 100LX & 200LX (see product description, page 12). These excellent shareware programs added this feature to the HP 95LX, 100LX and 200LX. (Editor's Note: As of this writing, the 200Buddy file launcher feature overrides this undocumented 200LX feature. However, Buddy users can turn off Buddy by pressing CTRL-- and turn it back on by pressing CTRL-+. The two launchers are somewhat complementary as Buddy is optimized for built-in applications and FILER.INI for DOS applications.)

The 200LX feature is undocumented, meaning that it's a little bonus added to the 200LX, but unsupported by HP. You won't find any reference to the feature or the FILER.INI file in the *HP 200LX User's Guide*. This article will attempt to show you how to set up the FILER.INI file and use this feature. The article is based on our experience with this feature to date. We hope it will get you started using this feature, but make no claim as to the completeness of the information presented. The fact that this feature is "undocumented" means that HP's Technical Support hotline doesn't support this feature and will, most likely, not be able to give you any help with it. It also means that the feature may be dropped from future ROM software revisions of the 200LX or subsequent versions of the HP Palmtop. We sincerely hope that this doesn't happen. The FILER.INI feature cannot be transferred to another HP Palmtop.

Testing the autoload feature and creating FILER.INI

Enough disclaimers. Let's get a feel for what this autoload feature can do. To access it we first have to create the FILER.INI file. We'll start with a simple test case using one of the DOS applications built into the HP 200LX.

ICN200LX.EXE, an icon viewer and editor, is found in the D:\BIN directory. It is a program that lets you view, edit, or create icons to be used in Application Manager. You can start the program from Filer by highlighting ICN200LX.EXE and pressing ENTER. You get a screen that looks like this:



HP 200LX Icon Editor

ABOUT THE AUTHOR

Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to support publications for HP computers. He is the president of the FastAid Company, 314 S.W. Logan, Ankeny, IA 50021. Ed's CompuServe ID# is [75300,3667].

From here you can load existing icons, and create and save new ones.

The autoload feature is built into the 200LX. It is activated by instructions in the FILER.INI file. To set the Icon program up to autoload .ICN files from Filer, we have to create a FILER.INI file that contains the appropriate instructions.

Start MEMO and type in the following two lines:

```
[Launcher]
ICN=D:\BIN\ICN200LX.EXE %
```

The first line, [Launcher], must be included, it must be spelled as shown and be enclosed in square brackets. Upper or lower case letters may be used.

The second line tells the 200LX which data files will be associated with which application. The autoload feature reads the line and knows that whenever a file with a .ICN extension is highlighted in Filer and ENTER is pressed, the autoload feature will start the ICN200LX program and load the highlighted .ICN file into it.

The ICN above refers to the three-letter file extension for icon data files. The equal sign tells the feature to "associate files with this extension to the following." The path name and MS-DOS program name of the associated application follow. FILER.INI requires the complete path and filename of the associated file. It won't be able to find "ICN200LX", even if the PATH statement in your AUTOEXEC.BAT file contains "D:\BIN". You also have to include the .EXE or .COM extension in the name.

The last character on the line is a percent sign. It is the code that stands for the full name of the data file that will be loaded into the ICN200LX.EXE program. Be sure to put a space in front of the percent sign.

After you've entered these two lines in Memo, press [MENU] File Save and key in the name **C:_DAT\FILER.INI**. (FILER.INI must be in the C:_DAT directory.) Make sure that the ASCII check box in MEMO has a check mark in it.

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TEST AUTOLOAD FEATURE

Switch back to Filer, press [F5] (Goto), key in **D:\BIN** and press [ENTER]. In the D:\BIN directory you'll find several icon files that end with the extension .ICN. Highlight one of the filenames and press [ENTER]. Almost immediately the ICN200LX.EXE program will start, displaying the icon file you highlighted. Press **Q**uit to quit ICN200LX.EXE, highlight another ICN file and press [ENTER] to view that icon. You're up and running!

What happened?

The HP 100 and 200LX are set up to run program files from Filer. For example, you highlight a file with a .EXE, .COM, or .BAT extension and press [ENTER] and the program runs. Ordinarily, if you were to highlight a data file like one of the .ICN files and press [ENTER] you'd get the error message:

```
"Cannot run file: File extension must
be .BAT, .COM or .EXE."
```

With FILER.INI in the loop, the error message is by-passed, the associated .COM or .EXE file is run instead, and the highlighted data file is loaded into the .COM or .EXE application.

Limitations to using FILER.INI and workarounds

There are two limitations to the use of this built-in autoload feature. The first is that it doesn't work as is with the built-in applications. That is, you can't create an entry in the FILER.INI file to launch a built-in application by highlighting its data file. We'll talk about that later and suggest a workaround.

The second limitation is related to DOS batch files. The 200LX lets you highlight a .BAT, .COM, or .EXE file and press [ENTER] to launch it. However, you sometimes need to load a .BAT file into a text editor to view or modify it. You cannot use the FILER.INI approach described above to load DOS Batch files into a text editor to edit them. If you try the above approach with batch files, you'll lock up your 200LX.

Workaround: Using FILER.INI to view, edit, or launch batch files

It would be nice to be able to highlight a batch file and have the options to either view it, edit it, or launch it. You can view a batch file from FILER by highlighting it and

pressing [F8] (View). You can run it by pressing [ENTER]. There is no easy edit option.

Fortunately, there is at least one way to get around the FILER.INI batch file limitation and create such a system. To understand this workaround, lets first look at a way to use FILER.INI to quickly go to the DOS prompt.

1. Load FILER.INI into MEMO and add the following line.

```
CMD=D:\DOS\COMMAND.COM
```

Save the modified FILER.INI file and return to Filer.

2. Press [CTRL]-[123] to go to DOS. At the DOS prompt type **REM > C:\0.CMD** and press [ENTER]. This creates a file, called 0.CMD. The file is empty and takes up no disk space.

3. Type **exit** and press [ENTER] to return to Filer. You should see the 0.CMD filename in the C:\ directory listing.

4. Highlight 0.CDM and press [ENTER] and the DOS command prompt is displayed.

The line you've just added to FILER.INI tells the autoload feature to run COMMAND.COM, the DOS command interpreter. This causes you to "go to DOS." If you want, you can copy the 0.CMD file to other directories on your disk so that this shortcut to DOS will be available in more than one place.

Running batch files from FILER.INI

The fact that you can launch a copy of COMMAND.COM using FILER.INI makes it possible to run a batch file from FILER.INI. The general form of the line added to FILER.INI in this workaround looks like this.

```
EXT=D:\DOS\COMMAND.COM /C C:\assoc.bac %
```

EXT stands for the file extension you wish to associate with COMMAND.COM (i.e., the extension of the file you wish to highlight and press [ENTER] in order to run the batch file).

assoc.bat stands for the batch file you wish to associate with a the given "EXT" extension.

As an example, try the following.

1. Use Memo to create the following batch file. Save this file as C:\TEST.BAT:

```
@echo off
REM Test.bat
echo Hello, I'm the %0 program
echo The "data file" I'm associated
with is %1
echo.
type %0
pause
```

2. In Memo create another file that contains some text, for example: "This is the SAMPLE.TST file" (omit quotes). Save this file as C:\SAMPLE.TST.

3. Use Memo to add the following line to the FILER.INI file.

```
TST=D:\DOS\COMMAND.COM /C C:\test.bat %
```

Save the FILER.INI file.

4. Go to Filer, highlight SAMPLE.TST and press [ENTER]. You should see the following.

```
Hello, I'm the c:\test.bat program
The "data file" I'm associated with
is C:\sample.tst

@echo off
echo Hello, I'm the %0 program
echo The "data file" I'm associated
with is %1
echo.
type %0
pause

Press any key to continue . . .
```

What happened was this: FILER.INI detected the "TST" extension and responded by running COMMAND.COM which, in turn, ran TEST.BAT. It's possible to run a batch file from FILER.INI using this method.

Viewing, editing, or running batch files: you choose

Remember our goal: To create a system whereby we can view, run, or edit a highlighted batch file. Let's see if we can get FILER.INI to let us highlight a batch file, press [ENTER] and be asked whether we want to Run it, View it, or Edit it.

One way to do this uses ECHONL.COM, a program discussed in Vol.3, No.4, Pg.53 of *The HP Palmtop Paper*. That issue gives detailed instructions on how to create ECHONL.COM using Memo and the built-in Debug feature of the HP Palmtops. The batch file that follows uses an ECHONL command.

How CHOICE.BAT Works

CHOICE.BAT works by picking up the "%" code from FILER.INI, converting it to %1, inside the CHOICE.BAT program and storing it as an environment variable, Fn (short for Filename). Since there's no second command line parameter, at this time, the CHOICE.BAT program displays the prompt.

When you enter the additional command line parameter, namely E, V or R, the CHOICE.BAT program builds a batch file named $.BAT file and runs it. The $.BAT program contains the line "C:\choice.bat C:\test.bat V" which causes the Choice program to jump to the label :V, invokes the file viewer and loads the TEST.BAT program into it.

The toughest part of understanding this code is keeping the batch file parameters straight. %0 stands for the name of the currently running batch file. %1 stands for the first command line parameter. %2 stands for the second. %Fn% stands for the contents of the environment variable "Fn". If you can keep track of the variables as they go from FILER.INI to CHOICE.BAT to $.BAT and back to CHOICE.BAT, then seriously consider a career in computer programming.

CREATE VIEW/EDIT/RUN BATCH FILE

First we'll create a batch file to give us the Run/View/Edit option. In Memo, key in the following batch file. Don't type the "//" delimeters or the comments to the right of them.

```
@echo off
if exist $.* del $.*     //Delete the
                        //intermediate files
if not "%2"=="" goto %2 //If the second
                       //parameter is not
                       // blank go to the
                       // the appropriate
                       // label below.
set Fn=%1              //Set environment
                       // variable
echo Options for %Fn%  //Put the prompt
                       //on the screen
echo R)un, V)iew, E)dit?
Echonl %0 %Fn% > $     //Put CHOICE and
                       //Filename in the
                       //$ file
copy $+con $.bat > nul //Append input to
                       //$ and create
                       // $.BAT
$                      //Run $.BAT file
:V                     //View commands
VU %Fn%
goto end
:E                     //Edit commands
ted3 %Fn%
goto end
:R                     //Run command
%Fn% %0
:End
```

*[When you run this batch file, you be asked to press **Run**, **View**, or **Edit**. Be sure to press [F6] and [ENTER] after making your selection.]*

The VU command in the VU %FN% line refers two VU.COM, a file viewer on the last two Subscriber PowerDisks. You can substitute another file viewer or just use the command `TYPE %Fn% | d:\dos\more` in place of VU %Fn%.

The ted3 command in ted3 %Fn% refers to TED3.COM, a text editor. You can substitute another text editor such as VDE.EXE or Qedit.EXE.

Save the above batch file as C:\CHOICE.BAT.

MODIFY FILER.INI
Use MEMO to add the following line to FILER.INI:

```
bat=d:\dos\command.com /c c:\choice.bat %
```

Save the FILER.INI file and return to Filer. Point at TEST.BAT and press ENTER. You'll see the message,

```
Choices for C:\test.bat
R)un, V)iew, E)dit?
```

Press **V** F6 ENTER to view contents of TEST.BAT.

Press **E** F6 ENTER to open TEST.BAT in the text editor you set up in CHOICE.BAT.

Press **R** F6 ENTER to run TEST.BAT. You should see a message something like this:

```
Options for C:\test.bat
R)un, V)iew, E)dit?r^Z
Hello, I'm the C:\test.bat program
The "data file" I'm associated with
is c:\choice.bat

@echo off
echo Hello, I'm the %0 program
echo The "data file" I'm associated
with is %1
echo.
type %0
pause

Press any key to continue . . .
```

List/extract/view an archive file

This example shows you how to use FILER.INI to set up a system that will let you highlight an archived file, press ENTER and be given the options to list the files in the archive, extract one or several files from the archive, or view the contents of one of the files in the archive.

The example below assumes that you are looking at an archive file created by LHA.EXE. LHA is a file compression program that lets you bundle a group of files together in a compressed file that ends with the extension .LZH.

Suppose you have a group of documentation files that take up a lot of space on a disk and are referred to only on rare occasions. To conserve space, use LHA to archive them into a single compressed file called ALLDOCS.LZH.

You'd like to be able to access the documentation files without having to uncompress them all. You might want to get a listing of the files in ALLDOCS.LZH. You might want to view the contents of one of the files without extracting it. You might want to extract one or several documentation files from the archive. Below is LZH_OPT.BAT, a batch file that will give you these options.

```
@echo off
REM LZH_OPT.BAT
if exist $.* del $.*
if not "%2"=="" goto %2
set Fn=%1
echo Options for %fn%
echo L)ist, V)iew, E)xtract ?
echonl %0 %fn% > $
copy $+con $.bat
$
:L
LHA L %fn% | more
echo.
pause
goto end
:V
lha p %Fn% %3
goto end
:: if you have VU.COM or another file
:: viewer substitute the following
:: 4 lines in place of the last two
:: lha e %Fn% %3
:: vu %3
:: del %3
:: goto end
:E
lha x %Fn% %3
:end
```

Add the following line to FILER.INI.

```
lzh=d:\dos\command.com /c c:\lzh-opt.bat %
```

The next time you point at an LZH compressed file and press ENTER, you'll see a prompt that asks you to press **L**ist, **V**iew, or **E**xtract, followed by F6 and ENTER. You can use List first to see what files are in the LZH file. To view a particular file in the archive, type **V**, followed by the file name, followed by F6 ENTER. To edit a particular file, type **E**, filename, F6 ENTER.

You'll have to wait a couple of seconds before the LHA program starts to work. (You'll wait forever if you forget to press CTRL-Z or F6 and then ENTER).

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Compiled batch files: another workaround

The second way to get around the "no batch file" limitation of FILER.INI is to convert the batch file into a .COM or .EXE file with a batch file compiler. There are several such batch-file-compilers on the shareware market. BATLITE.LZH is an example of one such program. BATLITE .LZH contains the program used to compile the batch file and a documentation file describing how to use it. Once you've converted a batch file to a .COM file, you may use the .COM file in place of the "D:\DOS\COMMAND.COM /C" ploy described earlier.

Using FILER.INI with the built-in applications

The autoload/FILER.INI feature was designed to handle DOS programs on the HP 200LX. By itself, it does not work with the built-in, System Manager compliant programs such as Memo, Phone, Appointment Book, 1-2-3, etc. However, with a little help from a couple of useful add-in programs, FILER.INI's usefulness can be extended to System Manager applications as well.

KEYSTUFF AND FILER.INI
The first of these add-ins is KS.COM, a small program that "stuffs" a character or series of characters into the keyboard buffer, causing the Palmtop to execute them. Functionally, this

program lets you enter predetermined strings of characters or commands into the Palmtop, just like a macro.

We needed to modify the original keystuff program to make it work with FILER.INI. The modified version, KSX.COM along with the original KS.COM are found in KS.ZIP, on this issue's *HP Palmtop Paper ON DISK* and on CompuServe. The file also includes a description of how to use keystuff. For example, when KSX.COM is available, you can put the following command in the FILER.INI file:

```
gdb=c:\ksx.com @c@$09%/
```

This command lets you highlight a .GDB database file and press [ENTER] to start the built-in Database application and automatically load the database file. Similar commands may be created for files that have the extensions, .NDB, .EQN (for HP Calc/Solver), and even .WK1. We've included examples of several such commands in the KS.ZIP mentioned above.

If you don't have *The Palmtop Paper On Disk*, there's another way to get FILER.INI to work with System Manager programs. This solution involves a program called Pushkeys, built into the HP 100/200LX. PUSHKEYS.COM is a built-in program that stuffs keystrokes and commands into the keyboard buffer, causing them to be automatically executed in much the same way as a macro. Pushkeys is a Terminate and Stay Resident program that uses .MAC macro files created by the built-in macro application for its input.

The solution involves several steps. We'll walk through them and leave it up to you to decide if all the additional keystrokes are worth the extra effort.

1. Exit System Manager completely, by pressing [&...] [MENU] **A**pplication **T**erminate [F10] (OK).

2. At the DOS prompt, key in the command `d:\bin\pushkeys /i` and press [ENTER]. You should see the message "Pushkeys installed." Restart System Manager by typing **200** and pressing [ENTER].

3. Create a .MAC macro file to use with the Pushkeys program. This file will contain the keys and commands you wish to execute with Pushkeys. To create this file, follow these steps:

A. Press the Filer key and go to the C:_DAT directory and highlight the SETUP.ENV file. Press [F2] and copy the SETUP.ENV file to SETUPENV.BAK. This step saves the current macros in a backup file and ensures that what we're about to do can be undone.

B. Press [CTRL]-[&...] to start the System Macro application. Then press [F7] to clear out ALL the macro definitions that you may have.

C. Point at the Fn+F1 field and press [ENTER]. In the Description field type GDB; in the Contents field, type `{Database}{Menu}fo{Tab}`. (There is a shortcut to entering a key name bracketed in French braces. Press [F6] and then the key. For example, to enter {Database} in the Macro Contents field, press [F6] and then press [CTRL]-[PHONE].) When you're finished entering the macro code, press [F10] (OK).

D. Press [MENU] **F**ile Save **A**s and save the file with the name **GDB.MAC**

4. Add the following line to FILER.INI and save the file.

```
gdb=d:\bin\pushkeys.com c:\_dat\gdb.mac
```

Start Filer and point at any file that has an extension of .GDB and press [ENTER]. The database application will start, the Open File screen will be displayed and the highlight bar will be resting in the File selection portion of the screen. Select the .GDB database file to load and press [ENTER].

This approach has a limitation: It only takes you to the Database File selection screen. You have to select the .GDB file from there. This is because Pushkeys doesn't recognize "%" as a valid command line parameter, nor does it have any meaning in a System Macro.

Pushing FILER.INI to the limit

If you're interested in extending further the capabilities of FILER.INI, check out another add-in program called PNS200 (Point-N-Shoot).

The PNS200.EXE (and its data file) will let you create menus similar to the menus we created above for .BAT and .LZH files. The advantage of using PSN200 is that you don't have to create separate batch files for each application. PNS200 will also run KS.COM so that you can start System Manager applications and automatically load the data file pointed at. The disadvantage is that the coding in the PNS200.INI file is very cryptic and will require some experimentation to gain mastery of the program.

Why keep this neat stuff secret?

As was mentioned in the beginning of this article, FILER.INI is a "undocumented" bonus program in the HP 200LX. Such undocumented features are not unusual in HP products and one can only speculate as to why they are left on the Palmtop. Perhaps these programs were developed for HP "in-house" use. HP may have felt that the programs were of some use to the general population, but limited in their appeal or required a little too much technical savvy to use. They may have left them on the Palmtop for the more adventurous and self-sufficient users to play with. They may have decided not to mention or document them so they wouldn't confuse the majority of users or spend a lot of money technically supporting little-used applications.

It's fortunate for us that they left FILER.INI on the HP 200LX and PUSHKEYS.COM on both the 100 and 200LX. They are very useful programs that let us, with a little bit of work, expand the capabilities of HP's fine Palmtop PCs. It's fun to discover that you've got some pretty good prizes in HP's "Cracker-Jack" computer.

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Programmer's Corner:

TIPI: A Small Programming Language for Small Computers

TIPI 2.0 is a small structured programming language written to run on small DOS-compatible portables like the HP Palmtops.

By Kent Peterson

Back when I was a tiny little programmer, I dreamed of having a tiny little personal computer I could take with me anywhere. I pictured myself programming on the shores of a secluded lake, a high-tech hermit coding the Great American Program.

Well, life doesn't always work out exactly the way we plan. I got married and acquired two sons, a lazy cat and a whole bunch of computers. I finally got my tiny little personal computer and developed TIPI – a programming language designed from the ground up for palmtop programming.

TIPI: A "Threaded Instruction Processing Interpreter"

TIPI (pronounced "tepee") is a small, structured programming language that runs on any MS-DOS computer, but has been optimized for palmtops. It was originally written to run on the very small Atari Portfolio. I have since ported it over to the HP 100LX and optimized it for the Palmtop.

The name TIPI is an acronym meaning "Threaded Instruction Processing Interpreter." I chose to make TIPI an interpreter rather than a compiler to avoid having a separate compile and link stage. (For an explanation of programming terms see the "Non-programmer's introduction to programming" on this page) I wanted TIPI to be able to let programmers quickly try various ideas. The term "threaded" refers to the way the instruction "building-blocks" link together within the interpreter. The TIPI interpreter takes up about 12K of disk space and TIPI programs are

A non-programmer's introduction to programming

Hopefully, this introduction will de-mystify some terms used to describe computer programming. A computer program is a series of instructions that tell the computer how to behave. A program may tell the computer to act like a word processor, a database program, a game, etc. Programs can be simple, comprised of a few lines of instructions, or quite complicated, thousands of lines long.

Programming languages

Computers only understand 0's and 1's. They only respond to a small set of instructions that do simple math and store the results in memory. For a computer to do anything it has to be fed a series of instructions and memory locations for data. This is a program and it is also made up of 0's and 1's.

Since it is difficult for people to make sense out of long lists of 0's and 1's. Programmers created symbols for each machine instruction. Then they wrote programs that would translate one human readable symbol, like ADD, into one machine readable instructions like 0110. This was the first "programming language," an "**assembler**." It allowed programmers to write a program in a text editor using recognizable symbols like ADD, SUB, MOV. The assembler translates the file into the machine executable instructions that are saved into another file. That "executable" file can than be run on the computer. This saved a lot of time and allowed programmers to write large programs.

They then realized that there were many routines within a program that they were writing repeatedly, like printing or saving a file. Each one of these routines might take 50 or more instructions. So they wrote a program where one human readable instruction would translate into (or compile) the whole series of instructions needed to PRINT or SAVE. The instructions were still typed into a text file and then "**compiled**" into an executable file. Languages like COBOL, Fortran, and C are examples.

When you made a mistake in a program you would have to re-compile it every time. Some one thought of combining the editor and compiler into one development program to make writing software easier. This is called an "**interpreted**" programming language. You type the human readable instruction at the terminal and the instructions are translated and run in one step. This allows for easy testing and prototyping at the keyboard. Languages like BASIC, AWK, FORTH, and TIPI are examples.

Additional programming help

Even with all the developments and improvements in programming languages, the process still has many problems and pit falls. To help overcome the remaining limitations programmers use many additional software "tools." Taken as a group these additional support programs are referred to as a **Workbench**. One of the most basic tools is a "debugger", which is a program that helps pinpoint the location of bugs in the program as it runs. Programmers also use collections external routines, sets of pre-programmed instructions, which can be called and included in the program they are writing. These external routines are stored in files referred to as "**libraries**."

Internal variations

Internally a programming language has to interpret the instructions that it receives, store the temporary results and provide accurate output. To interpret instruction it needs to read a line of instructions and separate out the instruction from memory locations, and data to be processed. This is called "**parsing**". Some programming languages allow you to enter a mathematical expression as you would write them in an algebra class, Basic, Fortran, C, etc. (A + B). Others, like FORTH and TIPI use Reverse Polish Notation, RPN, to write math expressions, (A B +). (The HP Palmtop's HP Calc let's you use either Algebraic or RPN. Refer to the HP Palmtop User's Guide, index under RPN.)

A memory area is set aside to store a sequential series of intermediate results. This is called a "**stack**". Some languages manage the stack automatically, while others like FORTH and TIPI allow programmer direct access to the stack.

Numbers used in calculations are mostly handled in one of two forms in the computer, integer and floating point. **Integer** is simply 1, 2, 3, 10, 5000, etc. **Floating point** is 2.45, 10.35665, etc. Floating point math requires a specialized set of routines, which may be part of the programming language or part of the computer's processor or math co-processor. The type of number used will have an effect on the accuracy of results and is the source of rounding errors.

Robert Roney
Technical Editor, The HP Palmtop Paper

ABOUT THE AUTHOR

Kent Peterson spends his days as a manager at a software development house in Issaquah, Washington. In his spare time he has written for Micro Cornucopia, Portable 100, The Computer Journal of the PPC, Analog Computing, Modern Haiku and other fine magazines.

similarly small. TIPI requires about 100K of RAM to run in and is thus well-suited for palmtop computers such as the Poquet PC or the HP-LX series.

TIPI was created to be:

Efficient — TIPI is based on a multi-stack interpreter. This lets numeric and string data pass quickly and consistently between instructions, greatly reducing the need for complex internal parsers and temporary variables.

Structured — TIPI is very modular. All TIPI instructions have one entry and one exit point. All instructions are clearly defined and perform most of their interaction via stacks. TIPI does not have the spaghetti-generating GOTO instruction.

Small — TIPI is not a language for creating huge programs. The basic philosophy of TIPI is that problems should be broken into small, discreet, easily understood components. In threaded languages, performance degrades as the threads get longer and longer threads are what you get when you write big programs. To keep TIPI reasonably fast, the TIPI interpreter is limited to processing programs of 32K or less.

Clear — A program is more than a set of instructions telling a computer how to solve a particular problem, it is also a document precisely describing a set of problem solving procedures. A programming language needs to be comprehensible to the computer the program will run on and clear to the programmers who write the code and future programmers who may have to modify it. With TIPI, every effort has been made to make the language consistent and easy to read.

Extensible — Rather than having a complex system of libraries and "includes," TIPI lets you use a text editor to copy commonly used instruction definitions into your code. This means you can define your own instructions in TIPI, so you can add the features you've always wanted in a language.

A good way to think about this is to think about how the English language is extended by the addition of jargon. Here's an example. Suppose you didn't know what RAM is. You ask someone and they tell you "RAM means Random Access Memory" or "RAM is memory that forgets everything when you shut your computer off". Let's say that one of these definitions makes sense to you and you remember it. From now on when you talk about computers, you can use the word RAM because you know what it means in terms of things you already knew. You use the jargon as a quick and easy shorthand for something more complicated. You have just extended your vocabulary to include the word RAM.

Where English has words, TIPI has instructions. In the same way that you add jargon to your English vocabulary by defining a new word in terms of words you already know, you extend TIPI by defining new instructions in terms of existing instructions.

Here is a small chunk of TIPI code defining a new instruction called WAIT, which causes execution of the program to pause until the

Table 1 — TIPI Instructions

Table 1 -- TIPI Instructions

Control Instructions	Graphics Instructions		Math Instructions		
	Drawline	Scroll	Abs	*	<
Begin ... Until	Drawrect	Setclip	Max	+	=
	Getfont	Setfont	Min	-	>
Case ... of ... endof	Getpoint	Setlinetype	Mod	/	
of ... endof	Movepen	Setlogorg			
.	Ploticon	Setpencolor	Misc. Instructions		
.	Plotpoint	Setreprule			
default ...	Plottext	Setvmode	Bit?	Random	
Endcase	Screen	Zoom	Bye	Randomize	
	I/O Instructions		Error	Ticks	
Case$ ... of$ .. endof$			Eval	Timeout	
of$ .. endof$	Beep		False	True	
.	Bload		Machine?	Version	
.	Bsave		Not	#	
default$ ...	Close		Off	(...)	
Endcase$	Cls		Stack Instructions		
	Color				
Do ... Loop	Color?		Depth		
	Column		Depth$		
If ... Else ... Endif	Comstat		Drop		
	Console		Drop$		
While ... Wend	CR		Dup		
Data Instructions	Current		Dup$		
	Cursor		Over		
Fetch	Defseg		Over$		
Store	EOF		Pick		
	Extended		Pick$		
Debugging Instructions	Filepos		Pop		
	Getbyte		Push		
Tracecol	Getnum		Rot		
Traceoff	Getport		Rot$		
Traceon	Getvol		Swap		
Tracerow	Get$		Swap$		
Tracevar	Inkey$				
	Inport		String Instructions		
Defining Instructions	Isinput				
	Isoutput		Asc		
Defarray	Key		Chr$		
Define ... Enddef	LF		Date$		
Defstr	Locate		Instr		
Defstrarray	Mouse		Lcase$		
Deftable ... Endtable	Open		Left$		
Defvar	Opencom		Len		
	Outport		Ltrim$		
DOS Instructions	Peek		Mid$		
	Poke		Parse$		
Call	Print		Replace$		
Chdir	Printchr		Right$		
Command$	Printer		Rtrim$		
Env$	Print$		Str$		
Firstfile ... Nextfile	Putbyte		Time$		
Getdir	Putport		Ucase$		
Kill	Row		Val		
Makedir	Setvol		"		
Remdir	Sound		+$		
Rename	Varptr		=$		

Sample TIPI code

No self-respecting developer article would be complete without sample code, so I've included a brief listing here to show you a bit more what TIPI is all about. This simple application will display the character for any key you press along with its keycode in decimal and hex. If you subscribe to the disk version of this publication, you will find a ZIP file containing the full shareware release of TIPI 2.0 which includes many more programs and a full TIPI reference manual. Alternately, you can obtain TIPI and all the code from CompuServe's HP Handhelds forum. If you have any questions or comments about TIPI, drop me some E-mail. The odds are that I'm up, the coffee's on and I'm hacking on TIPI.

```
#DEMO.TPI by Kent Peterson 11/17/94

define hex$ ( n -- )
            (   -- h$ )
# Returns hex equivalent of a number.
 "" begin
     dup 16 mod
     "0123456789ABCDEF" 1 + 1 mid$
     swap$ +$
     16 / dup not
    until drop
enddef

define showtime ( -- )
                (  -- )
# Shows the current time
# on the top row of the screen.
 0 5 locate
 time$ print$
enddef

define spaces ( -- )
              (  -- )
# Print$ four spaces.
 "    " print$
enddef

define asciiline ( c -- )
                 (   -- )
# Displays c as a character,
# its hex code and its decimal code.
 dup chr$ print$ spaces
 dup hex$ print$ spaces
          print  spaces
enddef

define  wait_for_key ( -- c )
                     (  --  )
# Waits until a key is pressed
# and then returns the keycode.
# While it's waiting it shows
# the current time.
 begin
  showtime
  key dup
  if dup endif
 until
enddef

#dow let's put all this stuff together.
cls
# Displays the column headings
# and the instructions.
|
|
|   Char Hex   Dec
|   ==========
|
|
|   Press any key to see its code.
|   [ESC] exits.

0 cursor # Hide the cursor.

# This is the main loop. It will
# loop until the user presses
# the [ESC] key.
begin
 wait_for_key
 5 3 locate
 dup asciiline
 27 =
until

1 cursor # Set the cursor back to normal.
```

user presses a key:

```
define wait
begin key until
enddef
```

Once you have defined WAIT, you can use the WAIT instruction anywhere in your code.

TIPI contains over 170 built-in instructions for the programmer to use as building blocks. These instructions fall into eleven categories. Table 1 lists these categories and their associated instructions.

A Bit of History

TIPI borrows from a computer language called Forth. Forth was invented in the late 1960's by Charles Moore. I did a fair amount of work in Forth in the early 80's and was very impressed by its elegance and power. Forth tends to be cryptic. BASIC, on the other hand, is regarded as being quite legible, but lacking in structure and power. TIPI is my attempt to combine some of the best elements of these two languages together with neat ideas from AWK, C and Assembly language.

In December of 1992 I began work on TIPI. I wrote the TIPI interpreter on a desktop PC using a shareware compiler called ASIC. ASIC is the work of David Visti and his compiler takes code that is "almost BASIC" and compiles it down to a very small executable. I chose ASIC over other BASIC compilers such as QuickBasic or PowerBasic because it produces such tiny EXEs. I could have chosen to write TIPI using C, Assembler or Forth but I had become intrigued with ASIC and wanted to use it in a full development project.

Once I had the core interpreter running, I began adding features to the language. Like Forth, TIPI has a numeric stack and does all math operations using a syntax known as Reverse Polish Notation or RPN. RPN was originated by Jan Lukaciewicz, a Polish mathematician. While I knew that RPN can be confusing for new programmers, I also knew that RPN is efficient and unambiguous. Furthermore, using RPN keeps the interpreter fast and simple while making all instruction calls consistent.

TIPI differs from Forth by having an additional stack for string values. In addition to grafting some of BASIC's legibility onto TIPI, I wanted my language to inherit some of BASIC's wonderful string handling capabilities. By giving TIPI a string stack, I was able to create RPN equivalents of MID$, LEFT$, RIGHT$ and other useful string functions. I also created some new functions such as the faintly AWK-like PARSE$.

Throughout the process of developing TIPI, I had to battle the tendency to add features to the language. I wanted my language to remain small enough to fit on the Portfolio, but still be powerful

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TIPI Contest

Between now and April 15, 1995 I'll be accepting entries in the great TIPI code contest. The contest is open to ANY user of TIPI (even if those of you who haven't gotten around to registering it yet!)

You entry must consist of a TIPI program you have written that you think is interesting, practical, fun, neat, cool or generally worth more than the disk space it occupies. You may enter as many programs as you like and you may enter as many times as you like. Entries must be submitted either via E-mail or on MS-DOS floppy disks. Your disks will not be returned, nor will your E-mail costs be reimbursed. E-mail may be sent to either Internet *peterson@halcyon.com* or CompuServe *[72310,2174]*. Disks may be mailed to: *Kent Peterson, GREAT TIPI CODE CONTEST, 360 NW Dogwood Street A-201, Issaquah, WA 98027 USA.*

Copyrights to all code entered into this contest will remain with you, but any code entered may be distributed to registered TIPI users.

What You Can Win

The author of the niftiest program (as judged by myself, my wife and some of my nerdy friends) will win the following incredible prizes:

1. One box of delicious Boehm's Chocolates from Issaquah Washington.

2. A genuine TIPI Code Contest trophy to show off to all your friends.

3. A free cup of Espresso from one of Issaquah's many fine Espresso bars and a chance to hang out with TIPI's developer. (If you make it to Issaquah, Washington.)

In May of 1995, anyone who has REGISTERED TIPI by April 5, 1995 will receive a disk containing some new TIPI programs written by me, the winning entry from the contest and whatever cool runners-up there were.

enough to let me write "real" programs. This made some trade-offs necessary.

No Floating Point

Floating point math is one of the things that I consciously left out of TIPI. Forth purists will tell you that you don't need floating point math. I'll tell you that TIPI doesn't have it because it would make TIPI too big and too slow for what I wanted (but the Forth guys are basically right). I have seen 3-D animation engines written using only integer math and two friends of mine have coded an entire hockey game (including player physics and AI) without using any floating point code.

The TIPI data stack and all its math instructions work with long (32 bit) signed values. This means TIPI can handle integers from -2,147,483,648 to 2,147,483,647. This is a very wide range and with some creative scaling, you should be able to handle almost any problem that you thought would require floating point math. Of course, I am not a fanatic on this point. If I get a huge number of registrations accompanied by requests for floating point math, I will most probably add it to a future version of TIPI.

Once I had TIPI running and stable, I experimented with various runtime file compression programs. I tested LZE, PK-Lite, Diet and Compack. Of these, Compack gave the best compression, so I used it to make TIPI even smaller.

Eek! Bugs!

Throughout most of 1993, I worked nights and weekends on TIPI. I found myself using TIPI for more and more projects, not just on the Portfolio, but on my desktop PC as well. I also found the big drawback of writing programs in your own language: when your program has a bug, you don't know if the problem is in your program or your language. Of course, I had my share of both types of bugs and tracking these wee beasties down caused me to develop the TIPI debugger.

The debugger is a very simple debugger that does a surprisingly good job of tracking down problems. Since TIPI code is interpreted, debugging statements can be dropped into the code anywhere to give you a kind of XRAY of the program as it runs. The debugger consists of an informational window that may be turned on and off via the instructions TRACEON and TRACEOFF. The position of the window is controlled by the instructions TRACEROW and TRACECOL and it can be placed wherever it is convenient. The window also pops up automatically in case of a fatal error to give you a "post-mortem" dump.

The TIPI debugger displays the contents of the data and string stacks, the last instruction executed and the command TIPI is about to execute. Also, by use of the TRACEVAR instruction, you can tell the debugger to display the contents of any variables. With the debugger displayed you can step through your code until you find the source of your particular problem.

The debugger has saved me literally days worth of work and on one occasion helped me find a bug not in my TIPI code, nor in my language but rather in Dave Visti's ASIC compiler! A bit of detective work and some E-mail to Dave cured the problem, but it sure proved to me the value of a good debugger.

TIPI's shareware debut

In the fall of 1993, I released TIPI as shareware. I had spent much of the summer working on the manual for

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TIPI, writing sample programs and creating a small integrated environment for programming which I called "The TIPI Programmer's Workbench". I uploaded TIPI to several forums on Compuserve including the Palmtop Forum and the IBM Programmer's Forum. I also uploaded it to the HP--Handhelds forum because I knew that HP had a little DOS palmtop.

My timing coincided exactly with the virtual death of the Atari Portfolio. The Portfolio, which had been one of the first DOS palmtops, had been basically abandoned by Atari. In the meantime, Sharp, Zeos, HP and others had come out with more powerful palmtops. I vowed I would stick with the Portfolio if even one Portfolio user registered TIPI. Not one did.

Meanwhile, the HP folks really seemed to like TIPI. Its RPN syntax wasn't strange to anyone who grew up with HP calculators. A lot of folks downloaded TIPI from the HP forum and I got some complimentary E-mail and some intelligent questions. When I got my first registration (from an HP owner, of course!) I raided the family savings account and bought myself a brand new HP-100LX.

TIPI worked fine on my new toy, but the more I played with the HP, the more I wanted to do with TIPI. A lot could be added by using TIPI's built-in DEFINE instruction, but some of what I wanted to accomplish would require some low-level coding changes.

HP Palmtop spurs further development

From HP's forum on Compuserve, I got the form that would let me apply to become an HP Software Developer, filled it out and sent it off.

A few weeks later I got a very fat envelope from HP. This was the Rosetta Stone of the HP hacker, the HP-100LX Developer's Guide. This contains all kinds of useful information such as what interrupts do what as well as cool semi-useless stuff like what the HP internal codenames for the palmtops are. (Editor's Note: A new 100LX/200LX technical reference manual will be available soon. Check the new issue of *The HP Palmtop Paper* for details.)

I set to work on some serious hacking. First I added control of the software power toggle and battery timeouts and then I began to dig into the graphics routines.

Boy, I'm Sure Glad I Didn't Quit My Day Job

Meanwhile, the registrations weren't exactly pouring in. In fact, they weren't exactly trickling in either. Sure, I got a few registrations (all from HP owners by the way), but by and large TIPI had not made a huge impact on my bank account. If you figured in what I'd spent on my new HP, my increased Compuserve bill and all the coffee I was drinking, I was way in the hole. Still, I was having loads of fun.

I checked with other shareware authors, especially language authors, and I found out that most of these folks aren't getting rich either. Those that are doing the best are the ones who stick with it, give their users an incentive to register and do a lot to pitch their product. Those all sounded like good ideas and they all sounded like work, so I poured myself another cup of coffee and got back to programming.

MakeEXE

One of the requests I'd gotten from users was to give TIPI the ability to make stand-alone EXEs from their programs. Under the existing method, you would run a TIPI program (for example HANGMAN.TPI) by typing

```
TIPI HANGMAN.TPI
```

at the DOS command line. If a user wanted to share a TIPI program with a friend (or sell it), he had to include the TIPI.EXE with his program. If

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TIPI could make its own EXEs, then users could distribute just those EXEs. Furthermore, running the program would be as simple as typing

```
HANGMAN
```

at the command line.

Because the TIPI interpreter is so small, I didn't have to rewrite my entire program to make a compiled version of TIPI. Instead I created a slightly modified version of the TIPI interpreter that could be bound together with a user's source code to create a single EXE. Using this method, I got the MakeEXE function up and running in one evening.

I put this feature into the shareware version of TIPI, but I added one small element -- a registration code. When the MakeEXE is used in an unregistered version of TIPI, the EXE will be made, but it will display a small shareware notice before the user's program runs. By setting things up in this way, I let the users see the usefulness of the MakeEXE function while also giving them an incentive to register.

Help System

I also went to work on improving the workbench and the TIPI user's manual. I knew that TIPI would be new to everyone, so they would need good reference materials. The HP-100LX has a built-in database engine, so I created a help file in that format for HP users. I also knew that some people were using TIPI on regular PCs, so I set to work on writing a PC-based help system for TIPI. Naturally, I chose to write this in TIPI.

Since the help system had a lot of text, this quickly grew beyond the 32K limit I had imposed on TIPI, a bit of a quandary. I knew that my original reasons for keeping TIPI small were good and that if I went against my instincts I would soon have something as bloated, ugly and slow as Microsoft's Foundation Classes (heh, heh, just kidding there, Bill). Still, I had to do something.

I fell back on my core belief of busting a problem into byte-sized chunks. The TIPI workbench is a batch file that calls a TIPI program. The help system takes that one step further by calling multiple TIPI programs. The whole thing works, no single chunk is larger than 32K and the help system itself serves as an example of how to write a fairly large program in TIPI.

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[Letters continued from page 5.]

I was surprised. What caused the shift in attitude? I guess it was the objective facts printed on the screen of a non-threatening and quite interesting piece of technology. I hadn't changed, their perception of me had.

Maybe more women should buy HP Palmtops.

Lucinda Hall
Fairfield IA, USA

Analyzing Bonds on the HP Palmtop

I have been using an HP 19BII calculator for some time and recently bought the HP 100LX. I was disappointed to find that the 100LX does not have a Bond Menu to calculate the yield to maturity or price for a bond. I am writing to ask you if you know of an aftermarket program that would enable the 100LX to perform the above tasks.

Petros D. Goneos
New York NY, USA

[Bond calculations are not built into the HP Palmtop but they can be handled by HP Calc's Solver application and by Lotus 1-2-3. There are several sources for these "missing" HP-19BII financial functions, from the amateur to professional levels. One is a short article that describes how to use HP CALC or Lotus 1-2-3 for such calculations (page 35, Mar/Apr 93 issue of The HP Palmtop Paper). Also available is the following shareware, freeware, and commercial software:

BONDS.ZIP — *100LX compatible SOLVER file solving a wide selection of BOND problems.*

BOND95.ZIP — *contains a 95LX-compatible SOLVER equation that will allow the user to solve complex BOND problems, including yield to maturity, yield to call, price, accrued interest, etc. Registered version also has other useful "bonus" equations ready for use. Documentation is a good "primer" on bonds.*

Bond Analysis *($219) — estimates prices and yields of fixed income securities under a broad range of assumptions.*

Lane Bond Trader *($399) — provides tools needed to calculate bond prices and yields, and manage portfolios.*

@Bonds *($395) — professional investment analysis software for the fixed income trader and analyst that runs on the 95LX and 100LX as a Lotus 1-2-3 add-in. Calculates yields, prices, sensitivities, duration, convexity, value of .01 and 32nd, accrued interest, etc. for investment in treasuries, agencies, 'munis,' corporates, zeros, Cds and bills.*

Bonds and Bills *($250) — includes: Euro (A &S/A), US Corporate, US agency, US treasury, US domestic and Japanese bonds.*

Bond @nalyst *($495.00) — 1-2-3 add-in to help you analyze US and foreign bonds, bills & CD's.*

PG03 *(ff 835) — Finance Epargne Placement: Provides multiple equations and Lotus solutions libraries for the HP 95LX for professionals and students, including: Bonds (bariation, volatility and duration), Matif, Options Black-Scholes valuation, Coefficient ß, and many others.*

Finance *($89) — learn and do basic financial analysis, mortgages, loan analysis, bond analysis, compound interest, and more. Comes on a PCMCIA Type II card for the 100LX.*

STUDENT.ZIP — *contains a BOND.EQN, containing a set of bond calculations developed by finance student Douglas Gilbert.*

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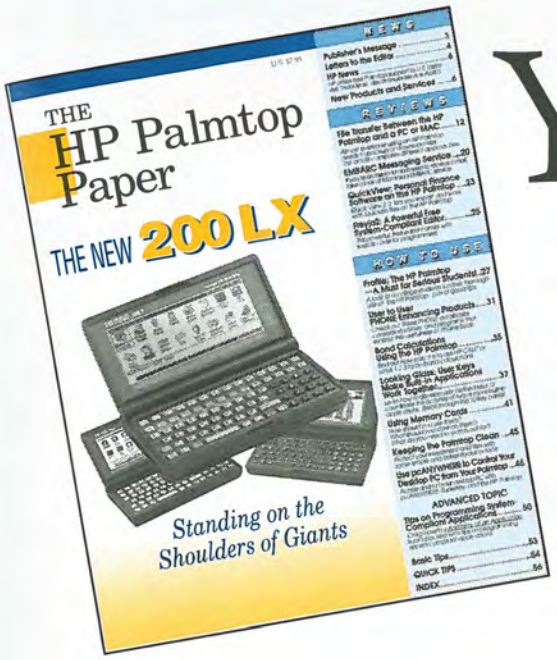

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••• BASIC TIPS •••

[Tips by Rich Hall. Many are elaborations on tips found in the APPS.INI and NOTES.NDB files in the HP 200LX.]

Appt

95LX 100/200LX

Set alarm to check appointment book / todos

Get, and stay in the habit of checking your appointment book and todo list every morning. It doesn't matter how well the HP Palmtop organizes your appointments, if you don't look to see what's coming, you'll miss it.

Occasionally I'll backslide on this. I'll be in the habit of checking APPT for months and then slip right out of the habit. When this starts happening, I set an alarm to play at the time I usually arrive at the office. The appointment says, "Check your appointments and todos!" Once this didn't work, so I set five appointments for the same time, five days in a row. It was annoying, but I re-established the habit of checking APPT.

If I have a really important appointment coming up, or one that I have to prepare for, I set more than one appointment for it. For example, if I have to prepare a report for a meeting, I'll set an appointment for three days before the meeting stating, "Prepare report for 10/25 meeting." If I want to make sure I leave a meeting on time, I'll set an appointment for the time I want to leave. The alarm rings, I check my appointment book and say, "Sorry, I've got to go."

Database

95LX 100/200LX

Find searches in HP Palmtop Databases

You can use the F4 Find key on your HP 100/200LX to locate difficult-to-find Phone or Database entries. For example, let's say you're looking for the name and phone number of a person you met at a conference. You remember that you entered his name into your Phone Book. You also remember that the person had an unusual hobby: collecting eggs. You entered that in the F3 Notes field.

You go to the PHONE application, press F4 to go to the Find dialogue box. Type in **egg** and press F10 or ENTER. The 100/200LX searches the entire phonebook and stops at the first entry in the Phone Book with "egg" entered in any of the fields. If you press F4 (Find) F4 (Next), the Palmtop starts from wherever you are in the phonebook list and searches forward. If you press F3, the Palmtop searches for previous instances of the word.

The F4 Find feature works in and of the database-related applications (APPT, PHONE, DATABASE, NOTETAKER, WORLDTIME). The Appointment Book and Phone Book on the HP 95LX have a Find feature accessed by pressing F7.

HP Calc

95LX 100/200LX

HP CALC functions below second row keys

The labels just below the Z, X, C, V, B, N, and M keys are functions used in the HP CALC applications. A step-by-step example will help clarify what they are and how to use them.

Step 1. Open Arithmetic, make sure Stacks and Registers are visable.

When you first start HP Calc you should come up in the Arithmetic function. If not, press MENU Arithmetic on the HP 95LX or MENU Applications Arithmetic on the HP 100/200LX. The Registers and Stacks should be displayed. If they are not, press F2 (SHOW) on the 95LX. On the HP 100/200LX press MENU Options Calculator Modes, make shure the "Show Stack and Show Registers boxes are checked and press F10 (OK). You should see a display that looks something like this:

HP Calc Arithmetic function with Registers and Stacks displayed, HP 100/200LX

Step 2. Key in the number 4 and press ENTER.

This enters 4 in the calculation line at the bottom right of the screen. Now we're ready to see what those keys do.

Step 3. Press the Z through M keys, see what happens.

Press the keys one at a time and watch what happens to the calc line and the Stack immediately above it. The Stacks are used to keep track of the last three numbers entered, a handy feature for some calculations. If I key in 3.1, press ENTER and then key in 2.2 and press ENTER, 3.1 is bumped up to the Stack 1 position (i.e. it is stored in Stack 1 buffer memory). If I then key in the number 5 and press ENTER, 3.1 is bumped up to the Stack 2 position and 2.2 is bumped up to the Stack 1 position. If all three Stack positions have numbers in them and I key in a fourth number, the Stack 1 number is bumped to Stack 2, the Stack 2 number is bumped to Stack 3, and the Stack 3 number is bumped out of the Stack and forgotten by HP Calc.

The Registers can be used to store and recall additional numbers as described below. Below is a summary of what to expect.

Key pressed
What happens (answer in example)

Z ($\sqrt{X}$)
Calculates square root of number on Calc Line (2)

X ($1/x$)
Calculates the reciprocal the of number on Calc Line (0.50)

C ($x \leftrightarrow y$)
Swaps the number on Calc Line with the number in Stack 1 position (0.00 if your stack was cleared).

V ($R\downarrow$)
Moves Stack down one position. Stack 3 number moves to Stack 2, Stack 2 number to Stack 1, Stack 1 number to Calc Line, Calc Line number to Stack 3. (Calc Line = 0.50)

B (LAST)
Copies number in Stack 1 to Calc Line.
(Calc Line = 0.00. If you were in the middle of a calculation, say **1+2+**, and pressed **B**, the number in Stack 1 would be copied into the calculation, **1+2+0.50**. If you then pressed ENTER, the answer, **3.50** would appear on the Calc Line.)

N (STO)
Lets you STORE the number on the Calc Line in one of the Registers so you can access it later. (Key the number **1.4** into the Calc Line. Now press **N** (STO) and **0**. Look up at the top of the screen to see that 1.4 is now stored in the Reg0 position.)

M (RCL)
Lets you RECALL a number stored in the Registers. (Press **0** ENTER to clear the Calc Line. Now press **M** (RCL) **0** and 1.4, the number stored in Reg0, is restored to the Calc Line. You can use this feature in the middle of a calculation. So if you wanted to add the number in Register 0 to 5.2, you would press **5.2+ M0** and then press ENTER.)

Although this example shows how the "Z" thorough "M" keys can be used in the Arithmetic function, remember that they can be used in the other HP CALC applications.

Memo

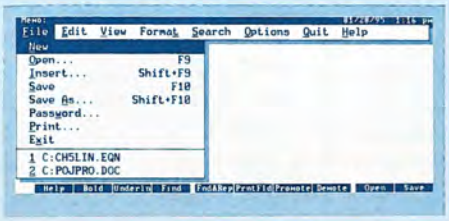
95LX 100/200LX

Mess up memo? Restore previous version

If you make a mistake in a memo file, you can back up over the mistake with the backspace key, or use the Cut and Paste feature to delete a line or two. If you've made some extensive mistakes and have not yet saved the file, you can restore your previous version, if you have one.

On the HP 95LX, press MENU File Open and answer Yes when asked if you want to "Replace file without saving?" Then select the appropriate file name and press ENTER.

On the HP 100/200LX, press [MENU] **F**ile and you are presented with following File menu:



File menu, 100/200LX

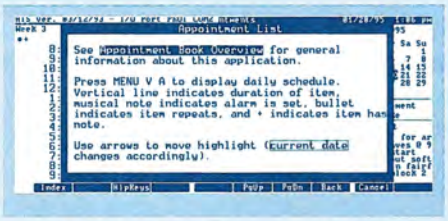
The last two files you had open are listed at the bottom of the screen. Press 1 and the last file you saved will be loaded.

& Misc

95LX 100/200LX

Press F1 for Online Help

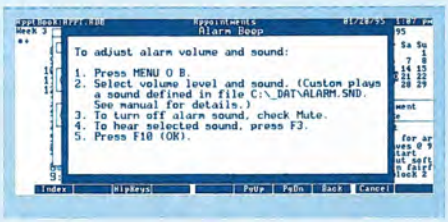
Press [F1] on any HP Palmtop to get online help wherever you are. Let's say you are a new user of the HP 200LX and open up Appointment Book for the first time. Just press [F1] and you get the Appointment List help screen, describing the basic features of APPT, describing the various symbols used in the Appointment Book list view and how you move to different days and weeks, and change the duration of appointment slots.


Appointment List
See Appointment Book Overview for general information about this application.
Press MENU V A to display daily schedule.
Vertical line indicates duration of item, musical note indicates alarm is set, bullet indicates item repeats, and * indicates item has a note.
Use arrows to move highlight (Current date changes accordingly).
Index
HlpRevs
PrtPg
PgDn
Back
Cancel

Main Appt list Help screen, 100/200LX

Note that certain words or phrases are highlighted on the 95LX and outlined (boxed in) on the 100/-200LX. You can use the up and down arrow keys to move to these words or phrases, and then press [ENTER] to get a more detailed description of what it means or how to use it if it is a feature.

Help is "context-sensitive" in that Help screen displayed by pressing [F1] relates not only to the application you are in, but to the specific feature you are using. For example, you are back in Appointment Book on the 100LX and you press [MENU] **O**ptions Alarm **B**eep to change the sound of the alarm on your Palmtop. The Alarm Beep dialogue screen is unfamiliar and you don't know what to do, so you press [F1] and get the following screen.


Alarm Beep
To adjust alarm volume and sound:
1. Press MENU O B.
2. Select volume level and sound. (Custom plays a sound defined in file C:_DAT\ALARM.SND. See manual for details.)
3. To turn off alarm sound, check Mute.
4. To hear selected sound, press F3.
5. Press F10 (OK).
Index
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Alarm Beep help screen, 100/200LX

This screen gives basic information on how to adjust volume and change the sound of your alarm.

Help screens are available for all the built-in applications on the HP 95/100/200LX.

Phone

95LX 100/200LX

Getting back to the top of the phone list quickly

I keep some special entries at the top of my Phone list. For example, 00Hometodo is a list of repairs I need to make around the house. 0XmasList is a list of potential Christmas presents for members of my family. There are other special entries.

Whenever I open my Phone Book, I like to be at the top of the list to see these special entries. This is no problem when I first open PHONE. The highlight bar is always at the top of the screen. However, if I open PHONE, go to a phone entry somewhere down the list (e.g. O'Toole, Mike), and then go to MEMO to write a note about something, when I go back to PHONE I'm still at O'toole, Mike.

The quickest way to go to the top of the phone list on any HP Palmtop is to press the HOME key ([Fn]-[<LeftArrow>]). Alternatives would be to press [MENU] **Q**uit to exit PHONE whenever you go to another application (a bit cumbersome). In my phone book on the 100LX, if I press **00**, I go to 00HomeTodo, the first entry in my phone book.

95LX 100/200LX

Select multiple records in Phone or Database

The HP Palmtops let you delete, extract, or print a group of items in the Phone Book and Filer on the 95/100/200LX and other Database-related applications on the 100/200LX. First you must select or "tag" the group of items you want to work on.

ON THE HP 95LX

Lets say you want to delete a few records from your Phone Book. Highlight the first record you want to delete and press [F9] (Tag). Highlight and tag the rest of the items, and press [F3] (Cut) to delete them all.

Items have to be tagged individually in PHONE and FILER on the 95LX. However, you can untag all files tagged in PHONE or FILER by pressing [ALT]-[F9].

ON THE HP 100/200LX

Highlight each desired item and press [<Spacebar>] to tag it. Press [DEL] and all selected items will be deleted. You can press [<Shift>]-[<Spacebar>] on a 100/200LX to alternately tag and untag all items in a Phone Book or Database. Filer on the 100/200LX lets you tag all items by pressing [MENU] **O**ptions, selecting **All**, and pressing [F10]. To untag all Filer items press [MENU] **O**ptions, select **None**, and press [F10].

WorldTime

100/200LX

Custom Cities list makes it easier to find time

The World Time "All Cities" list comes with over 475 cities already on it, and can add more as the need arises. (The maximum is limited by the available RAM disk space.) However, sometimes a smaller list is a bit more practical.

Let's say your home office is in Chicago and you're going on a business trip and will visit five cities: New York, London, Tel Aviv, Hong Kong, and Tokyo. You can create a smaller "Custom Cities" list that only displays these cities.

Press [CTRL] [HP CALC] to go to the World Time All Cites list. Since your home office is in Chicago, you probably have that city set up as your "Local City." If you don't and want to, start typing in **Chicago** until the highlight bar moves to that city. Then press [F7] (Local) and answer **Y**es when asked if you want to set it as your local city? The rest of this tip assumes Chicago as your Local City.

Move your highlight bar to each of the five cities mentioned above. A quick way is to start typing the name of the city and the bar will automatically jump to the city. To select a city for the custom list, press [+]. A check mark will appear on the same line as the city, over to the right (next to the time column, see screen display below). To remove a city from the custom list, highlight the city and press [-].

Once you have selected all of your custom cities, press [F9] and only those cities will be displayed.

Local City
Chicago, IL USA 1:14 pm
Custom Cities
Hong Kong Hong Kong ✓ * 3:14 am
London United Kingdom ✓ 7:14 pm
New York City, NY USA ✓ 2:14 pm
Tel Aviv Israel ✓ 9:14 pm
Tokyo Japan ✓ * 4:14 am
Help Add Note Find City Subset Local Convert All Map

Example of World Time's Custom Cities list

You can return to the All Cities list any time by pressing [F9] again. You can also access the Custom Cities list by pressing [F6] (Subset) and selecting Custom Cities. You can also use the Subset feature to define and select other subsets of your All Cities list.

▲▲▲ QUICK TIPS ▲▲▲

Appt

100/200LX

Appt too soon

Some users have found that their appointments will sound the alarm too soon. For example a 12:01am appointment will be fired off instead at 11:58pm. If this happens you may have a problem in the hidden file, C:_DAT-\ALARM.Q.

To fix this: You will have to make the hidden file visible and deletable. You can do this by entering the following command at the DOS prompt:

atrib c:_dat\alarm.q -h -r

First back up the file, then with the Appointment Book open, delete the ALARM.Q file. Then re-enter the Appointment Book and close it. A new ALARM.Q will be created. When you open Appointment Book again your alarms should be on time.

Mark Scardina
CompuServe ID: [76711,732]

95LX 100/200LX

Separate work and personal ToDos with priorities

You can use priorities in the ToDo list to separate work and personal tasks.

HP 100/200LX Example

Give all work related tasks priorities beginning with "A" (A1, A2, etc.) and all personal tasks priorities beginning with "B" (B1, B2, etc.).

To separate the items visually in the ToDo list, put a header in as the first entry in each main category. For example, key in **----Work----** at the ToDo Description, give it a priority of A0, and give other work-related ToDos priorities of A1-A9. Then key in **----Personal----** as another ToDo and give it the priority of B0. Give other personal ToDos priorities from B1-B9. After you've entered a few ToDo items, your ToDo list will look something like this:

```
A0 ---- Work ----
A1 Write letter to AJones
A1 Send estimate to JJ&C
A2 Compensation plan
A3 ...More...
B0 ---- Personal ----
B1 Fix cabinet door
B1 Change oil in car
B2 Xmas shopping
B3 ...More...
```

You can then change the default priority of new ToDos to whatever you enter most commonly. For example, you might want A1 (high-priority, work-related items) to be your default priority. Change this default priority in the Appointment Book by pressing MENU Options ToDo Defaults, tab to the Priority box and enter **A1**. From that point on, whenever you enter a ToDo, it will have the A1 priority entered automatically. If you need another priority level, you'll have to tab to the Priority box in the ToDo item entry screen and key it in.

HP 95LX Example

You can use this system with a few modifications on the HP 95LX. The 95LX Todos only allow nine priority levels ("1st" through "9th"). Enter the header **---- Work ----** as your first "1st Priority" ToDo and **---- Personal ----** as your first "2nd Priority" ToDo. Designate all work-relate Todos as 1st Priority and all personal Todos as 2nd Priority. After you've entered a few Todos, your Todo list will look something like this:

```
1st Priority:
  ---- Work ----
  Write letter to A.Jones
  Send estimate to J.C.
  Compensation plan
  ...More...
2nd Priority
  ---- Personal ----
  Fix cabinet door
  Change oil in car
  Xmas shopping
  ...More...
```

The default priority on the 95LX is 1st and cannot be changed. You can expand this system on the 95LX by adding additional priorities. For example, 3rd level priorities could be for your hobby, 4th level for your Church activities, 5th for the night classes you are taking, etc.

Rich Hall
Editor, HP Palmtop Paper

100/200LX

Use a timed macro to automatically update Database subsets

[Last issue (Nov/Dec 94) Al Harrington described how to use the 100/200LX Database application as a customized ToDo list, and how to use Subsets to organize categories of your list. This tip gives you an additional tool for managing a ToDo Database, or any Database that contains a Date fields. — Robert]

I created a database file, TODO.GDB, that uses two subsets, one to display items due today and another for items due tomorrow.

Instead of manually changing the date in each subset every day, I use a repeating appointment (at 6 AM every morning) that runs a macro updating the subsets. You can create this macro because the HP 100/200LX has the date key, Fn-(,); the + or - can be used to increment or decrement the date in a date field; and copy and paste can move the correct date into a subset definition.

The TODO database has a date field named **Due**. One of my subset definitions is **Due<={01/30/1995}**. This selects all items due today or past due items. My subset definition for tomorrow is **Due>{01/30/1995}**.

For "Today or before," subset the update macro opens a new database record; goes to the date field, **Due**; uses Date to enter the current date; uses + to move that one day in the future; copies that date; then goes to the subset edit view; deletes the old date; pastes in the new date and saves the changes. Similar procedure is used for the "Tomorrow" subset.

Following is the update macro:

```
{Database}{F2}{Tab}
{Date}+{Ctrl+x}{F10}
{F6}tod{Alt+E}{Left}
{BackSp}{BackSp}{BackSp}
{BackSp}{BackSp}{BackSp}
{BackSp}{BackSp}{BackSp}
{BackSp}{Ctrl+V}{F10}tom
{Alt+E}{Left}{BackSp}
{BackSp}{BackSp}{BackSp}
{BackSp}{BackSp}{BackSp}
{BackSp}{BackSp}{BackSp}
{Ctrl+V}{F10}a{F10}
```

Once you get this set up correctly you don't have to do a single thing. Each morning the subsets are updated automatically. You do have to make sure that nothing will interfere with the macro. The Database has to be set to the TODO.GDB and you can't leave the DOS window selected or a DOS application running. I've been using this macro for almost a year with little trouble.

Russ Fitzgerald
CompuServe ID: [71234,30]

Cases

95LX 100/200LX

Newton 110 case supports the HP Palmtops

I was looking for something to carry the HP Palmtop and StarLink card that would prevent them from rattling around and doing damage in my briefcase.

I found a nylon case with a belt loop that would handle the HP Palmtop, StarLink, and my Motorola Ultra Classic phone. It's made by a company called CaseLogic and it's called the PH1 Phone Case ($15, SRP $19.99).

The real surprise was the leather case designed for the Newton MessagePad 110 ($29). *[Ed. When we check the price on this found that Apple's leather case (H0075LL/A) sold for about $75.]* It's a little big for the HP Palmtop and StarLink card in a stylish, baggy kind of way. The interior is made of a satin-like material and has pockets for several PCMCIA cards. The external pocket was designed for the Newton MessageCard which is the same as the HP StarLink card. You can have your HP Palmtop and PCMCIA cards protected inside and you can see and hear your HP StarLink card on the outside. It's probably the best case out there for this combination.

Mark Ressa
CompuServe ID: [71052,256]

DOS

100/200LX

Avoid interference with DOS program run from the Appointment Book

You can run a DOS program at a specific time by putting the full pathname for its executable file, .EXE, .COM, or .BAT, in an appointment. Placing **lc:\batt100.com**, for example, as the first thing in the description field will run batt100 when the appointment's alarm would sound. [The alarm must be enabled and placing a Q in the location field will suppress any error messages.]

You do not need to leave the Appointment Book application open for BATT100 to run every time. But you do need to:

1. Be in System Manager. (If you have terminated System Manager or booted the Palmtop into DOS, no appointment alarms will run until System Manager is started again.)

2. Have enough free memory to run your DOS program.

3. Not have another DOS application open.

Mark Scardina
CompuServe ID: [76711,732]

Filer

95LX 100/200LX

Filer view changed from 95LX to 100LX

A most regrettable change from the 95LX to the 100LX was that the viewer in 100LX Filer displays only the printable character range. This is regrettable because it was handy to be able to 'browse' through binary files and get a rough idea of what's there.

Gilles Kohl
CompuServe ID: [100114,3146]

[Editor's Note: On either HP Palmtop you can go to DOS and use DOS's DEBUG command to view a short file. This will display all the characters in a file. For example to look at the TERM.ENV file in the C:_DAT directory you would type the following:

```
debug term.env
d
```

(the file will be displayed with the memory addresses and HEX codes to the left and the equivalent ascii characters to the right.)

```
q
```

The q quits debug. —Robert]

HP CALC

95LX 100/200LX

Add a second set of currency conversion tables to HP Calc

You can edit the Currency conversion sub-application in HP Calc to change or add new conversions up to a limit of 21. If you need more, you can create an additional set of 21 by duplicating the CALC.ENV file and switching between the two .ENV files.

The other limitation is that the conversion rates must all be constants, not formulas. It could be used for such constants as force and energy, Btu's, Joule's, watts, nano, tera, giga, etc. For very large numbers you may need to use the scientific format. (Press [MENU] Options Number Format... Scientific.)

Before re-using the built-in Currency conversions, close HP CALC; in FILER goto C:_DAT and copy the CALC.ENV file to CALCENV.BAK. Otherwise, once you key in a new set of conversions and close HP CALC, you'll lose the currency conversions.

The Currency Conversion sub-application can hold up to 21 possible conversions. All you have to do is highlight a field and press [F2] to Edit. Press [F2], again to change the name. Then key in a suitable conversion rate and press [ENTER]. Do the same for as many fields as you need up to 21 in all. When you're finished editing the fields, press [ESC] twice.

To get the currency conversions back, close HP CALC and run a simple batch file:

```
::SWAPCONV.BAT
@echo off
ren calc.env xxx
ren calcenv.bak calc.env
ren xxx calcenv.bak
```

The biggest limitation to this tip is that you should not run SWAPCONV.BAT while HP CALC is open.

Ed Keefe
CompuServe ID: [75300,3667]

Macros

100/200LX

Use System Macro in Phone to find a client record in another Database

I wanted to look up a customer phone number and quickly pull up the corresponding "folder" of information for that client. I created a client profile in the database application. I included name, address, last contact date, activity report, etc.. Then I wrote a system macro that would take me from the Phone Book name to the client's information in the Database application. The macro looks like this (single line, no carriage return):

```
{Enter}{Copy}{F10}{Database}
{F4}{Paste}{F10}{Enter}
```

You can create a system macro by opening the Macro application and entering the above code into the Contents field of an empty macro. You can also create a macro on the fly, recording the keys as you press them. For more information on creating system macros, see "System Macros" in the index of your *HP Palmtop User's Guide.*

The above macro is assigned to a function key. Whenever I want to activate it I press [Fn] and the function key. An example will clarify this. Let's say I assigned the

above macro to F1. I open my PhoneBook, highlight the desired name in the All Items list and press Fn-F1. Here's what the macro does, step by step:

{Enter} — Opens the individual item screen. The Name information is highlighted.

{Copy} — Copies the Name information to the HP Palmtop clipboard.

{F10} — Closes the individual item screen in the PhoneBook.

{Database} — Opens the Database application.

{F4} — Activates the Find function.

{Paste} — Copies the name information into the Find screen.

{F10} — Starts the Find search and goes to the desired item in the Database All Items view.

{Enter} — Opens the Individual Item view and shows me the client's profile.

Steve Michell
CompuServe ID: [73004,2607]

Memo

95LX 100/200LX

Use a TEMP.DOC file in MEMO to keep track of short notes

When I need to jot down a miscellaneous note, I'll open Memo and type it in. I save most miscellaneous, short-term notes as TEMP.DOC, just in case. I only store information in TEMP.DOC if I am almost positive I won't need it in the long term, but want it saved for a little while just in case. For example, if I'm going to pick a few items up at the store, I'll jot them down in Memo and save the file as TEMP.DOC. Once I get the items, I don't care about the note. It is overwritten when I next save.

Occasionally I'll jot down some information that I want to keep for a while and then delete, but I don't know quite what to do with it. If I save it as TEMP.DOC, I know it will get written over pretty quickly. Instead, I'll save it as TEMP1.DOC, TEMP2.DOC, etc. Since I don't use these file names very often, the information in them will remain on my Palmtop longer. When I finally do attempt to save another note to one of those file names, the Palmtop asks me if I want to "Replace the Existing File?" I stop the save and check out the existing file in Filer first, to see if the information in it was really worth saving. If it was, I'll give it a new name, transfer it to my PhoneBook, NoteTaker or Database, or save it under another name. If it wasn't, I'll copy over it.

Rich Hall
Editor, HP Palmtop Paper

100/200LX

Default tabs in Memo

The tab settings in Memo are only stored with FORMATTED files. If all you've typed in is ASCII text (no BOLD, UNDERLINE, OUTLINES, etc.), then your document is ASCII, not FORMATTED. The easiest way to force it to be FORMATTED is to press F2 twice. The first time turns BOLD on, the second time turns it back off (doing nothing, except setting the FORMATTED flag). Then, when you save the document, the TAB settings will be saved with it. (There's "no where" in an ASCII file to save the TAB settings.)

Everett Kaser
CompuServe ID: [74431,1441]

You can create a system macro to open Memo and set the tabs the way you like them.

Bob Russell
CompuServe ID: [71571,3072]

& Misc.

100/200LX

Make MIDI Music with the 100/200LX

I run Cakewalk 4.0 for DOS on my 100LX. (Cakewalk is MIDI sequencing software that lets you record, edit and play back music through a MIDI-interfaced instrument.) I have a 20 MB double flash card that I use to store Cakewalk and all of the files. I use the Key MS124 Midiator pocket MIDI box that connects through the HP serial cable. The speed is fine for smaller to medium arrangements, but on some larger MIDI files the timing is not quite right. The 100LX is great to PLAY MIDI files on, but I wouldn't want to use it to EDIT MIDI files.

Brian McCarty
CompuServe ID: [75121,2130]

NoteTaker

200LX

200LX NoteTaker displays tips

When you first start up the 200LX's NoteTaker (press CTRL-MEMO) you will see a handy little "tips" database. Most users will quickly start their own NoteTaker file and forget about this "tips" file. You can find it again by opening the file, **d:_dat\notes.ndb**, using the NoteTaker application.

This file has many important tips like how to change the icons INSIDE the Phone and Database applications. Yes, you can change the 'little phone' icon in the Phone application for one of your own. (You can create an icon using the 200LX D:\BIN\ICN200LX.EXE or ICN100.EXE .) You can also do the same for any database file. Just include an icon having the same name as your database but with the .ICN extension, in the same directory as the database file. Your icon will be displayed instead of the built-in icons of the 200LX.

Harry Konstas
CompuServe ID: [72540,620]

100LX

Minor NoteTaker Bug

There is a minor NoteTaker bug in some HP 100LX's (ROM versions 1.02 and 1.04 A at least). In NoteTaker, highlight an item in the All Notes list and press ENTER to view the individual Note card as shown below. Note that the cursor rests on the Title field.

Individual item NoteTaker Screen, HP 100LX

If you press F10 (Done) or ESC to return to the All Notes list, you will not be able to use the DownArrow key to move down the Notes list. When you press it, you'll get a beep. You will be able to use the UpArrow key, but once you get to the top of the list, you're stuck.

To avoid this problem, tab to the Note or Category field in the Note card screen and press F10 (Done) or ESC to return to the All Notes list. You'll be able to use the DownArrow key. A better solution is avoid the individual Note screen. Highlight an item in the All Notes list and press F3 to display the Note field only. You can still edit that field, and when you go back to All Notes, there's no DownArrow problem.

Rich Hall
Editor, HP Palmtop Paper

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Share/Freeware Index: pg 56

Product Index

Contact information for products mentioned in articles.
See Advertisers Index, next page, for additional product references.

HP PRODUCTS

Contacts: *Authorized HP computer dealers worldwide (i.e. the same place you can purchase an HP LaserJet). To locate an authorized dealer in the USA, call 800-443-1254. You can also purchase the 95LX & 100/200LX and its accessories from* ***ACE Technologies*** *at 800-825-9977 or 408-734-0100; Fax: 408-734-3344;* ***EduCALC*** *at 800-677-7001; Fax: 714-582-1445.* ***Global Connections*** *at 608-752-1537; Fax: 608-752-9548.*

HP 200LX 2MB — $699
(HP F1061A)
HP 200LX 1MB — $549
(HP F1060A)
HP OmniBook 600C PC
486DX2/50 170MB HD - $varies
486DX4/75 260MB HD - $varies
HP OmniBook 4000 PC
486DX4/100 520MB HD — $varies
486DX2/50 260MB HD — $varies
HP StarLink Service - $varies
Wireless messaging service, for "one-stop communications solution." Contact: *800-917-LINK.*
5MB.12v Flash Card — $499
(HP F1012A) with Stacker 3.0 data compression software (not for the 95LX).
10MB/12V Flash Card — $879
(HP F1013A) with Stacker 3.0 data compression software (not for the 95LX).
Dictionary/Thesaurus Card—$149.95
(HP F1005A)
AC/DC Adapter (HP F1011A)—$39.95
USA/Canada (Opt. ABA)
Europe (Opt. ABB)
Australia (Opt. ABG)
United Kingdom (Opt. ABU)
South Africa (Opt. ABQ)
PC Connectivity Cable — $24.95
(HP F1015A) Connect 95LX and 100/-200LX to DOS compatible PC.
MAC Connectivity Cable — $24.95
(HP F1016A) Connect 95LX and 100/-200LX to Apple PCs/MACs.
95LX Connectivity Pack — $119.95
(HP F1001A)
100/200LX Connectivity Pack — $119.95
(HP F1021B)
(HP F1021C) International
100/200LX Connectivity Pack Software Only — $70
(HP F1021-60002)
Connect/Adapter Kit — $24.95
(HP F1023A) 4 adapters for connecting the 100/200LX to modems, printers, and PCs.
100/200LX Accessory Cradle — $79
(HP F1027A) Connects the 100LX or 200LX to U.S. Robotics WorldPort V.42bis Modem, Skytel pager, and other products.
95LX Accessory Cradle — $60
(HP F1006A)
Service Agreements
For U.S. HP Palmtop users. Units must be under warranty to extend.
95LX, 1-year extension — $50
95LX, 3-year extension — $135
100/200LX, 2-year extension — $85
Contact: *HP, Corvallis Service Center, USA; Phone: 503-757-2002.*

NOTE: Suggested retail price listed.

OTHER PRODUCTS

@Bonds U.S. — $395
@Bonds Internat. — $495
Investment analysis. (See page 48)
Contact: *Montgomery Investment; Phone: 610-688-2508; Fax: 610-688-5084.*

acCIS 3.0 — $69
on 2MB SRAM card — $329
Automates CompuServe access, no additional software required to run. (See pages 14,15,17)
Contact: *Shier Systems & Software; Phone: 805-371-9391; Fax: 805-371-9454; CompuServe ID: [75030,3374].*

American Heritage Dictionary 3.0—$59.95
(See page 4)
Contact: *Softkey International; Phone: 800-227-5609; Fax: 404-427-1150.*

ACE DoubleCards and DoubleFlash+ cards — $varies
PCMICA Flash memory cards. (See page 30)
Contact: *See ACE Ad, back page.*

Bond @nalyst Standard — $495
Gold — $595, Platinum — $695
1-2-3 add-in to analyze bonds, bills, and CDs. (See page 48)
Contact: *Tech Hackers; Phone: 212-344-9500; Fax: 212-344-9519.*

Bond Analysis — $219
Financial software. (See page 48)
Contact: *Pocket-Consultant; Phone: 612-229-6260; Fax: 612-566-6727.*

Bonds and Bills — $250
Bond and Bill analysis. (See page 48)
Contact: *Christian de Lisle, Rabley Park, Ridge, Nr. Potters Bar, Hertfordshire, EN6 3LX, UK; Phone/Fax: 0707 642201.*

CakeWalk 4.0 — $99
Record, edit, and play back music through a MIDI-intefaced instrument. (See page 54)
Contact: *Twelve Tone Systems; Phone: 800-234-1171; Fax: 617-924-6657.*

CloseUp 6.0 — $199
Computer remote control. (See page 32)
Contact: *Norton-Lambert Corp.; Phone: 805-965-6767.*

CompuServe Information Service
CIS Rate changes — $varies
(see page 17).
Contact: *CompuServe USA; Phone: 800-848-8199 ext 231 or 614-457-0802.*

Finance — $89
Financial analysis. (See page 48)
Contact: *Pocket-Consultant; Phone: 612-229-6260; Fax: 612-566-6727.*

GAMES, COMMERCIAL

Many of these games were found in software store sale bins by the author of the article on pages 20-25.

Budokan — $24.95
Martial arts game. (See page 24)
Contact: *Electronic Arts Direct; Phone: 800-245-4525, 415-571-7171.*

Flight Planner — discontinued
Flight simulator, combat. (See page 5)
Contact: *Check closeout or sale bins in software stores.*

MicroSoft Flight Simulator for DOS, 5.0 — $65
(See page 25)
Contact: *Microsoft Corporation; Phone: 800-426-9400; Fax: 206-635-6100.*

Software Toolworks CD Gamepack I $39.95
Popular card games including Cribbage King and Gin King. (See page 22)
Contact: *Mindscape Inc.; Phone: 800-234-3088; Fax: 415-883-3303.*

Caddiehack CGA Tour — $4.99
MicroStar golf game. (See page 24)
Casino Games — $4.99
MicroStar disk containing Backgammon and Vegas Jonny's Draw Poker. (See page 21)
Contact: *MicroStar; Phone: 800-444-1343; Fax: 619-931-4950.*

Hoyle's Book of Games, Vol II: Solitaire — $9.95
Variations of solitaire. (See page 23)
Contact: *Sierra-On-Line; Phone: 800-757-7707; Fax: 206-649-0340; UK: 44-734-303171, fax 44-734-303201. Europe: Phone in France: 331-460-146-00, Fax: 331 46 317172.*

Falcon XT — discontinued
Spectrum's combat flight simulator. Check closeout and sale bins. (See page 5)
Solitaire Royale — $35
Variations of solitaire. (See page 23)
Contact: *Spectrum Holobyte; Phone: 800-695-GAME; Fax: 510-522-3587.*

Amarillo Slims 7 Card Stud — $12.95
Las Vegas poker. (See page 23)
Contact: *Villa Crespo Software, Phone: 800-521-3963; Fax: 708-433-1485.*

California Pro — $na
Golf simulator game. (See page 24)
Scrabble — $39.99
Word board game. (See page 21)
Contact: *Virgin Interactive Entertainment; Phone: 800-874-4607 or 714-833-8710.*

NFL Challenge — $70
Football simulator game. (See page 24)
Contact: *Xor Corp.; Phone: 800-635-2425; Fax: 612-831-8629.*

Go, Many Faces of — $39.95
Variations of Go-Moku. (See page 1)
Contact: *Ishi Press International; Phone: 408-944-9900; Fax: 408-944-9110.*

JetFighter II — $19.95
Flight simulator, combat. (See page 5)
Contact: *Velocity, Inc.; Phone: 415-492-3263; Fax: 415-982-3299.*

OTHER PRODUCTS (Continued)

HP Palmtop Paper, Back issues
Contact: *Thaddeus Computing, USA; Phone: 800-373-6114; Fax: 515-472-1879.*

INTERNET Service Providers
Contact: *Cybergate Phone: 305-428-GATE; Fax: 305-428-7977 or Delphi; Phone: 800-695-4005; Modem: 800-365-4636; Internet e-mail: INFO@delphi.com.*

JetEye PC Interface — $99
Provides IR transfer from 100/200LX and OmniBook to desktop PC. (See page 26)
JetEye Printer Interface — $117
Privides IR transfer from 100/200LX and OmniBook to printer. (See page 26)
Contact: *Extended Systems; Phone: 800-235-7576 or 208-322-7575; Fax: 208-377-1906.*

Key MS124 Midiator
Pocket MIDI Box — $179.95
MIDI interface. One MIDI in, 4 MIDI out. (See page 54).
Contact: *Key Electronics; Phone: 800-533-6434; Fax: 817-560-9745.*

Lane Bond Trader — $399
Calculate bond prices and yields. (See pg 48)
Contact: *Lane Business Systems; Phone 800-444-5263; Fax: 201-586-0929.*

MegaHertz 14.4
Fax/Modem card — $219
PCMCIA fax/modem card that works in the 100/200LX. (See page 30)
Contact: *Megahertz Corporation; Phone: 801-320-7000; Fax: 801-320-6002.*

Newton Message Pad Case — $75
(H0075LL/A) Case for Apple MessagePad 110. (See page 53)
Contact: *MacConnection, 800-800-0002. or MacWarehouse, 800-255-6227.*

OrCAD 3.11 — na
Schematic capture program no longer supported by its developer. Latest version does not work on Palmtops. (See page 33)
Contact: *Check sale and closeout bins in software stores.*

PG03 — ff 835
French language financial analysis program. (See page 48)
Contact: *Bruckert Diffusion, FRANCE; Phone: +33 (1) 40 21 24 08; Fax: +33 (1) 40 95 70 25.*

PhoneCase — $19.99
Carrying case (See page 53)
Contact: *CaseLogic Phone: 800-447-4848; Fax: 303-530-3822.*

Pocket Quicken — $69.95
Stand-alone version of Pocket Quicken for 100LX users. (See page 58)
Contact: *Intuit, Phone: 800-354-4023; Fax: 603-295-3015; International: 415-858-6095.*

PocketJet Printer — $499
Lightweight portable thermal printer with serial interface. (See pages 10,17)
Contact: *Pentax Technologies; Phone: 800-543-6144; Fax: 303-460-1628; BBS: 303-460-1637.*

PN-60 Printer — $399
Lightweight portable printer with serial interface. (See pages 10,18)
Contact: *Citizen America Corporation; Phone: 310-453-0614; Fax: 310-453-2814.*

Printer Cables:
PN60-100/200LX cable — $42
PocketJet-100/200LX — $35
(See pages 18-19)
Custom cables to connect lightweight printers to HP 100/200LX serial port.
Contact: *Shier Systems & Software; Phone: 805-371-9391; Fax: 805-371-9454; CompuServe ID: [75030,3374].*

PowerBasic — $275
BASIC programming language. (See page 45)
QuickBasic — $135
BASIC language from Microsoft (See page 45)
Contact: *Programmer's Paradise; Phone: 800-445-7899; Fax: 908-389-9227.*

SmartModem Fax/Modem/
Flash Memory card — $varies
PCMCIA Fax/Modem card with 2MB, 4MB, or 6MB of on-board flash memory. (see pages 12-17)
Contact: *Smart Modular Technologies; Phone: 510-623-1231; Fax: 510-623-1434.*

ThinFax Fax/Modem/
Flash Memory card — $varies
PCMCIA Fax/Modem card with 2MB or 4MB of on-board flash memory. (see pages 12-17)
Contact: *EXP Computer; Phone: 800-EXP-6922 x 641; Fax: 714-453-1319.*

User's Groups for the HP Palmtop
See box on page 9, this issue.

Webster's Random House Electronic Dictionary and Thesaurus — $69
(See page 4)
Contact: *WordPerfect Corporation; Phone: 800-321-4566; Fax: 801-228-5377.*

Webster's New World Spelling Checker — $39
Small, full-featured spelling checker for the HP 100/200LX. (See page 4)
Contact: *Thaddeus Computing Inc; Phone: (800) 373-6114 or (515) 472-6330; Fax: (515) 472-1879.*

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P.O. Box 869 or 57 E. Broadway,
Fairfield, IA 52556, U.S.A.
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- FREE AUTOMATED SUPPORT– is offered 24 hours a day by calling 800-443-1254.
- REQUEST FAXED OR MAILED INFORMATION – 800-752-0900.

On-Line Support – offered by these bulletin board services.

- COMPUSERVE: GO HPHAND FORUM - Call 800-848-8199 or 614-457-0802: For FREE membership state #231.
- AMERICA ON LINE: Keyword PALMTOP - Call 800-227-6364 or 703-893-6288 for membership information.
- INTERNET: comp.sys.palmtops; or eddie.mit.edu.

How to submit an article

The richness of *The HP Palmtop Paper* comes from the contributions of Palmtop PC users. We and your fellow users welcome your submissions. (We do not offer payment for articles; your reward is knowing that you've helped others.)

If you have a good idea and want to "go for it," send it in via CompuServe E-Mail [75300,2443], Internet: 75300.2443@compuserve.com, or send disk or hard copy to Hal Goldstein or Rich Hall at the above address. Alternatively you can send an outline of your idea. We will try to guide you as to when and whether we would use the article and contact you if we need clarification or have any suggestions. We may want to use an article but for a variety of reasons you may not see it for many months. Please understand that we cannot promise to run any particular article.

If you can, especially if you write a Palmtop Profile, send us a black and white photo of yourself.

Products advertised in this issue of *The HP Palmtop Paper*

Company	Product [Phone/Fax numbers]	Page number
Accurite	(Floppy drives for 100/200LX) [408-433-1980; Fax: 408-433-1716]	25
ACE	(ACE) [800-825-9977 or 408-734-0100; Fax: 408-734-3344]	28,29
	(Palmtop/Omnibook Products Includes: ACT! for HP Palmtops; ACE <->FAX Fax Software and Modem Bundles; ACE <->LINK File Transfer Software; BATTman Battery Monitoring and Data Protection Software; Carrying Cases; Desktop Card Readers; Acoustic Modem Couplers; HP 200LX Palmtop Systems; HP Color OmniBook Software, NiMH Batteries; Printers and Accessories; X-JACK Megahertz Modem Bundles.)	
	(ACE DoubleFlash+Plus FlashRAM to 80MB)	back cover
Aware Electronics	(Gieger Counter) [800-729-5397; Phone/Fax: 302-655-3800]	39
Brownstone	(Option Trading System) [800-642-7116; Tel/Fax: 908-654-7108]	46
Challenger	(Medical Reference/Education Software) [800-676-0822 x 123 or 901-385-1840 x 123]	27
CSS	(Barcode system/Environmental Case) [800-733-5017; Fax: 503-752-7037]	45
DataViz	(MacLink Plus) [800-733-0030 or 203-268-0030; Fax: 203-268-4345]	15
DesignWare	(Palmtop circuit analysis software) [617-923-4275 Fax: 800-536-7595]	37
E & B	(Leather Cases) [800-896-2273; Int'l: 916-344-5047; Fax: 916-782-9306]	17
EduCALC	(Accessories Catalog) [800-713-6522 or 714-582-2637; Fax: 714-582-1445]	31
El Dorado	(95/200LX and Accessories) [800-227-8292 or 415-494-6600; Fax: 415-494-1995]	14
Envoy Data	(PCMCIA Products) [602-892-0954; Fax: 602-892-0029]	14
EXP Computer	(ThinFax Modem) [800-EXP-6922 x 641; Fax: 714-453-1319]	inside back
Extended Systems	(Desktop Infrared Interface) [800-235-7576 or 208-322-7575; Fax: 406-587-9170]	41
	(JetEye Infrared Printer Interface	35
Greystone	(Universal Card Drive) [800-600-5710 or 408-866-4739; Fax: 408-866-8328]	4
Inmax	(CGA/VGA Graphics Pack 'Vision' [604-980-9991; Fax: 604-985-5597]	7
IntelliLink	(Windows Connectivity Pack) [603-888-0666; Fax: 603-888-9817]	21
MicroGram	(Card Software Development System) [Phone/Fax: 415-747-0811]	35
MobileMedia	(MobileMate) [800-562-2830]	23
Opus 63	(Liberator Shoulder Holster) [800-588-OPUS or 718-706-6787; Fax:718-706-7034]	19
PEPID	(Emergency Physicians database) [800-329-7872, ext.(73743); Fax: 708-475-0779]	11
Protege	(ATA/X Card Drive) [800-232-1347 or 714-961-7000; Fax: 714-961-0102]	33
Shier Systems	(acCIS - CompuServe access program) [805-371-9391; Fax: 805-371-9454]	47
Simple Simon Software	(SS Faxer) [817-283-6691; Fax: 817-283-5871]	35
Smart Modular	(Fax/Modem & Memory) [800-536-1231; Fax: 510-623-1434]	inside front
Steele Creek Tech.	(Card-link Drives) [Phone & Fax: 704-588-1780]	7
Thaddeus Computing	(HP Palmtop Paper) [800-373-6114; Fax: 515-472-1879]	8
	(HP Palmtop Paper ON DISK)	49

Shareware and Freeware Index (January/February 1995)
Software on The HP Palmtop Paper ON DISK or CompuServe

Product	Function	CIS forum/Library	Type	Page
ASIC.ZIP	Application: ASIC, a compiler for basic like code.	IBMPRO/Basic	Share	45
BUDDY.ZIP	Application: Ver. 2.0b add useful features to 100/200LX	HPHAND/100LX Gen, 11	Share	12
COMMO.ZIP	Application: Ver 6.41, a small, fast, reliable comm progarm	HPHAND/100LX Datacomm, 9	Share	12
TED3.ZIP	Application: Tiny Editor 3, use with TLG19.ZIP	na	Free	41
TIPI.ZIP	Application: A small Forth like programming language designed for the 100/200LX.	HPHAND/Palmtop Prog, 15	Share	43-48
GOALSET.GDB	Database: Sample goal setting & project management.	na	Free	36
PTPDSK19.ZIP	Database: PTP OnDisk Index in 95/100LX formats	na	Free	na
VERSES.ZIP	Database: Sample scriptures database.	na	Free	5
GAMES	**Shareware/freeware games on this special two-disk ON DISK issue are listed in the sidebar on**			**page 22**
TLG19.ZIP	Misc: Some files mentioned in Through the Looking Looking Glass. Contains: CHOICE.BAT, ECHONL.COM, GDB.MAC, LZH-OPT.BAT, PNS200.LZH, SAMPLE.INI, SAMPLE.TST, TEST.BAT, VU.COM.	na	Free	38-42
BONDS.ZIP	Solver: Bond equations for the 95/100/200LX. (contains 95LX .EQN file from BONDS95.ZIP)	HPHAND/100LX Gen, 7,11	Share	48
FIDROOF.SND	Sound: Fiddler on the Roof sound file.	na	Free	5
BATLIT.ZIP	Utility: Batch file compiler.	ZENITH/DOS Utilities,5	Share	41
CPK45.ZIP	Utility: Compack, file compression utility.	IBMPRO/10	Share	46
CASE.COM	Utility: Converts file to all capital letters.	na	Free	5
HLVSCR.ZIP	Utility: Contains HELV200 font for the 200LX.	HPHAND/100LX Gen, 11	Free	12
KS.ZIP	Utility: KSX.COM, keystuff for 100/200LX, used with TLG19.	na	Free	42
LHA213.EXE	Utility: File compression and archival, used with TLG19.ZIP	HPHAND/Gen, 1	Free	41
LZEXE.ZIP	Utility: File compression program.	ZENITH/DOS Utilies, 5	Free	46
STRIPCR.COM	Utility: Strips carriage returns from file.	na	Free	5
UNZIP.EXE	Utility: Latest version of utility to decompress .ZIP files	HPHAND/General,1	Free	20
HPLIBS.ZIP	Text/GDB: Descriptions of files in CIS HP forums	na	na	na
ADVERT.ZIP	Text: Descriptions, products advertised this issue	na	na	na
PTP19.ZIP	Text: The HP Palmtop Paper, January/February 1995	na	na	na
README.ZIP	Text: cover letter for HP Palmtop Paper ON DISK	na	na	na

Software mentioned and included in past issues of The HP Palmtop Paper ON DISK, The Subscribers PowerDisks, or CompuServe's HP HAND Forum

- Program (issue included in, CompuServe Forum, shareware/freeware status, page references this issue.)

- 100BUDDY.ZIP, (Best Tips, HPHAND/11, Share, 38); - 1STTHING.ZIP, (May/Jun 94, HPHAND/11, Free, 4); - 95BUDDY.ZIP, (Best Tips, HPHAND/7, Share, 38); - AWK.ZIP, (S/O 93, HPHAND/15, Share, 45); - DIET145F.ZIP, (Best Tips, HPHAND/1, Free, 46); - FCL.ZIP, (M/A 94, HPHAND/11, Share, 12); - PKL103.ZIP, (J/F 92, HPHAND/1, Share, 46); - QEDIT.EXE, (M/J 93, Zenith/6, Share, 41); - STUDENT.ZIP, (M/A 93, na, Free, 48); - VDE171.ZIP, (Best Tips, HPHAND/7, Share, 41)

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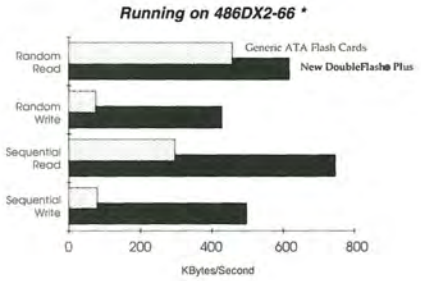

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